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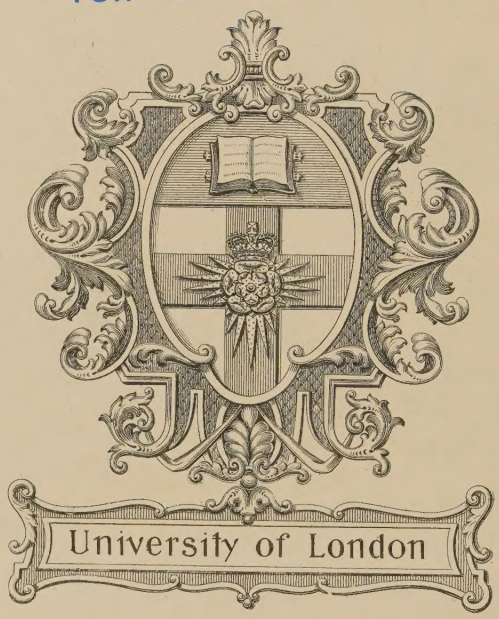

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REPORT

FROM THE

SELECT COMMITTEE

ON

THE HEALTH OF TOWNS;

TOGETHER WITH THE

MINUTES OF EVIDENCE

TAKEN BEFORE THEM,

AND

AN APPENDIX, AND INDEX.

Ordered, by The House of Commons, *to be Printed,*
17 *June* 1840.

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Jovis, 12° *die Martii*, 1840.

Ordered, THAT a Select Committee be appointed to inquire into the Circumstances affecting the Health of the Inhabitants of Large Towns and Populous Districts, with a View to Improved Sanatory Regulations for their benefit.

Martis, 17° *die Martii*, 1840.

And a Committee is nominated of—

Mr. Slaney.
Lord James Stuart.
Lord Viscount Sandon.
Mr. John Ponsonby.
Mr. Cowper.
Mr. Greene.
Mr. Richard Walker.
Mr. Wilson Patten.
Sir Harry Verney.
Mr. Baines.
Mr. Oswald.
Mr. Tufnell.
Mr. Brotherton.
Mr. Ingham.
Mr. William Smith O'Brien.

Ordered, THAT the Committee have power to send for Persons, Papers, and Records.

Ordered, THAT Five be the Quorum of the Committee.

Ordered, THAT the Committee have power to report Observations.

Jovis, 2° *die Aprilis*, 1840.

Ordered, THAT Mr. W. S. O'Brien and Lord Sandon be discharged from further attendance, and that Mr. Vigors and Mr. Mackinnon be added to the Committee.

THE REPORT - - - - - - - - - - - p. iii
MINUTES OF EVIDENCE - - - - - - - - - p. 1
APPENDIX - - - - - - - - - - - - - p. 219
INDEX - - - - - - - - - - - - - - p. 223

REPORT.

THE SELECT COMMITTEE appointed to Inquire into the Circumstances affecting the HEALTH of the INHABITANTS of LARGE TOWNS and POPULOUS DISTRICTS, with a View to Improved Sanatory Regulations for their Benefit, and who were empowered to Report their Observations, together with the MINUTES OF EVIDENCE taken before them, to The House;—— HAVE considered the Matters to them referred, and have agreed to the following REPORT:

YOUR Committee have inquired carefully into the matters submitted to them, and find that sanatory regulations in many of the principal towns of the realm are most imperfect and neglected, and that hence result great evils, suffering, and expense, to large bodies of the community. They have proposed several remedies; viz. general Acts to facilitate regulations in building, sewerage, and local improvements, applicable to populous districts; also the establishment of boards of health and local inspectors, and have made other suggestions detailed in their Report.

Before entering into the result of their inquiries, Your Committee venture to lay before The House a few preliminary observations respecting the important subject which has been entrusted to their consideration.

By reference to the Population Returns it appears that, from the beginning of the present century, the whole population of Great Britain has increased at the rate of nearly 16 per cent. every 10 years; from 1801 to 1811, thence to 1821, and again to 1831; and there is every reason to believe about the same rate of increase will be found to have taken place next year, when the next decennial return will be made. Whilst, however, such has been the increase in the population of the kingdom at large, reference to the same returns shows, that the augmentation of numbers in the great towns of the realm has been much more rapid: thus, whilst the increase of population in England and Wales, in 30 years, from 1801 to 1831, has been something more than 47 per cent., the actual increase in the number of inhabitants of five of our most important provincial towns has very nearly doubled that rate; being

Manchester	109	per cent.
Glasgow	108	—
Birmingham	73	—
Leeds	99	—
Liverpool	100	—(1)

giving an average increase of almost 98 per cent. in five cities, whose united population in 1831 amounted to 844,700, and at the present time may be calculated at not less than 1,126,000. Far the larger portion of this vast body of persons are engaged constantly in occupations connected with manufactures or commerce.

In many other of our large towns the increase in numbers has been of a like nature, and though not so rapid in several of them, yet, from a document lately

(1) Population Returns.

lately laid before Parliament, and compiled by authority, it appears that on a comparison of a large rural district with various provincial and other towns (within or contiguous to it), the increase in population in the former, during 10 years (1821 to 1831), was 11 per cent., and in the latter 31 per cent., showing that the numbers in towns augmented almost three times as fast as in the country (2).

By reference to the Population Returns, we find that the proportion of the humbler classes occupied as manufacturers or workmen, and living in towns, is, as compared with the labourers in rural districts, completely changed.

It appears, by returns laid before The House, that the latter class was to the former, in 1790, about two to one; and now the town workmen and manufacturers, instead of being one-half, are nearly double the number of rural labourers (3).

It must be evident, that owing to this rapid increase in the population of great towns, the proportion of the humbler classes, of those with little leisure for education or improvement, will be augmented, as the more wealthy and educated gradually withdraw themselves from these close and crowded communities; which thus more and more stand in need of some superintending paternal care.

The difference in the proportion of numbers entirely occupied in labour is very different in different places. An account laid before Your Committee, and to which they believe due reliance may be given, states this proportion to vary from 64 per cent. in the borough of Manchester, to 74 in Salford, 81 in Ashton, and 94 in Duckinfield (4).

Your Committee venture to remark, that the great towns of the realm may be divided into classes differing from each other in various circumstances, yet all requiring, more or less, the enforcement of sanatory regulations calculated for the benefit of their inhabitants. As,

1. The Metropolis.
2. Manufacturing Towns.
3. Populous Seaport Towns.
4. Great Watering Places.
5. County and other considerable Inland Towns not being the seats of particular Manufactures.

Besides these different classes of towns, there are various places, especially in the mining districts, in which a vast population of the working classes are spread irregularly over the face of the country, in some spots closely packed together, and in others dispersed in groups of dwellings more or less distinct from each other.

Your Committee have only been able to inquire into the state of a portion of these towns; to have done more would have occupied them many months; but have thought they best fulfilled the trust committed to them, by confining their investigation to the condition of certain populous towns, or sometimes parts of towns, which might be considered samples of others similarly situated. They have especially directed their attention to localities in which the working and poorer classes chiefly reside, with a view, if evils are found to exist there within reach of legislative remedy, to make such suggestions of improvement as may appear practicable.

Before giving the result of their inquiries, and any abstract of the evidence adduced

(2) Abstract First Report of Registrar-general of Births, Deaths, &c. 1840.

(3) Abstract Population Returns, 1831.

(4) Report on the State of Working Classes in a Manufacturing District, by Manchester Statistical Society, 1837.—*Vide* Riddall Wood's evidence.

adduced before them, they would say that considerable differences in the average state of the dwellings of the working classes, as might be expected, will be found to exist in different districts, arising sometimes from local causes, as the nature of the soil or situation, or the vicinity of a stream; and in others from the customs of the place, the nature of the occupations of the people, efficient or neglected municipal regulations.

Notwithstanding considerable allowance is to be made for these circumstances, Your Committee think it may be laid down as a general position, that persons of the same class, and engaged in the same sort of occupations in different populous towns, are subject, more or less, to the same evils (which are hereafter spoken to in evidence), that their health and comfort are affected by the same causes, and that the remedies suggested by Your Committee would be applicable to improve the condition of all or most of them.

Your Committee, therefore, believe that the account given of the state of certain districts inhabited by the working classes in Manchester (5) would be applicable to other great towns, in which the people are chiefly employed in the cotton manufacture; that the same might be said of Leeds, with respect to those busied in the woollen fabrics, and such a general resemblance will be found in towns similarly situated, that the same suggestions which would be applicable to one might, with some variation, be beneficially extended to all.

By the Report lately laid before Parliament, it appears that the mortality and diseases of cities vary greatly, and of parts of the same city. Thus, the annual mortality of Whitechapel is shown to be nearly four per cent., whilst that of Hackney, Camberwell, and St. George's, Hanover-square, is less than half that amount, and it is found, from "a comparison of the several districts, that, *cæteris paribus*, the mortality increases as the density of the population increases, and where the density and the population are the same, that the rate of mortality depends upon the efficiency of the ventilation and of the means which are employed for the removal of impurities (6)."

Your Committee now proceed to give an abstract of the principal points in the evidence submitted to them. They have made inquiries into the state of the dwellings of the poorer classes in various parts of the metropolis, in Dublin, Glasgow, Liverpool, Manchester, Leeds, Bradford, Hull, Birmingham, Coventry, and several other large towns, and though there is a great difference in many of the cases examined, they would state, as a general result, that evils of a most extensive and afflicting nature are found to prevail, affecting the health and comfort of vast bodies of their fellow-subjects, and which might be removed or much lessened by due sanatory regulations.

Evidence has been laid before them, depicting the miserably neglected condition of the abodes of multitudes of the working classes in Bethnal Green, Whitechapel, portions of Wapping, Ratcliffe Highway, the parish of Stepney, and other districts in the east of London; an account of which has already been laid before Parliament in a "Report to the Poor Law Commissioners on the prevalence of certain physical causes of fever in the metropolis, which might be removed by certain sanatory regulations;" and which is printed in the Fourth Annual Report of the Poor Law Commissioners (7).

The same remarks apply, though with somewhat diminished force, to various other districts of London inhabited by the poorer classes, especially parts of the Holborn Union, of St. Olaves, and St. George's Union, Southwark, and

(5) Mr. Riddall Wood's evidence.

(6) First Report Registrar-general on Births, Deaths, &c.; also Journal London Statistical Society, July 1839.

(7) *Vide* Dr. Arnott's evidence.

and to portions of Lambeth, Bermondsey (7), Walworth, Peckham, Vauxhall, and several other places.

The prevalence of fever and other disorders in these districts is attributed in great measure to the neglected state of the different localities, and is detailed in Dr. Arnott's evidence, p. 33, applicable more especially to the crowded eastern parts of London; viz.

1. Houses and courts and alleys without privies, without covered drains, and with only open surface gutters, so ill made that the fluid in many places was stagnant.

2. Large open ditches containing stagnant liquid filth.

3. Houses dirty beyond description, as if never washed or swept, and extremely crowded with inhabitants. "Heaps of refuse and rubbish, vegetable and animal remains, at the bottoms of close courts, and in corners."

In answer to the question, "Do you feel any doubt that the cases of fever and ill health you noticed arose from some of those causes?" the answer of Dr. Arnott is, "I have not the slightest doubt of it." Reference was then made by the Committee to the Report to the Poor Law Commissioners before alluded to, and the question is asked, "You state remedially at the top of page 14?" "We have no doubt that by proper sanatory police regulations, such as a board of health might decide upon, the typhoid fevers of London and other places might be made to disappear; and we think the remedial measures would cost less than it now costs to parishes and public charities to take care of the sick, and to provide for the helpless orphans and widows of those who die." "Is that your confirmed opinion?" *Answer:* "Yes, it is." This is stated to be applicable not merely to the crowded district east of London, but to any crowded districts of large towns in the realm.

Evidence of undoubted credit, and of the most melancholy description, has been laid before Your Committee, showing the neglected and imperfect state of the sewerage, paving, and cleansing in many parts of London inhabited chiefly by the working classes (8); and similar evidence applies with more or less force to many other great towns, the state of which has been investigated, as Dublin, Glasgow, Liverpool, Manchester, Leeds, Bradford, &c.

Your Committee do not wish to go here into details as to the miserable and neglected state of the dwellings of the poorer classes in various districts of the metropolis and other large towns, but refer to the evidence for that purpose, in which statements of the most melancholy and appalling nature will be found. It will there be seen, that the sewerage, draining, and cleansing is (in many places inhabited by dense masses of the working classes) greatly neglected; that the most necessary precautions to preserve their health in many cases appears to have been forgotten; that in consequence fevers and other disorders of a contagious and fatal nature are shown to prevail to a very alarming extent, causing wide-spread misery among the families of the sufferers, often entailing weakness and prostration of strength among the survivors; and becoming the source of great expense to the parishes and more opulent classes.

On these points Your Committee would refer to the evidence of Dr. Arnott, Dr. Southwood Smith, Mr. F. Moseley, and Messrs. J. Miller, Wagstaffe, Evans, J. Clarke, J. Wood Wilkes, E. White, Walker, &c. Many details will be found in the testimony of these gentlemen well worthy the attention of the Legislature, and exemplifying the severe and extensive evils borne by the humbler classes from neglect of proper sanatory regulations and precautions.

Your

(7) Mr. Wagstaffe's evidence; Mr. Moseley's ditto.

(8) *Vide* evidence of Messrs. Stodhart and Peeke.

Your Committee would also refer to the valuable Report of Dr. Arnott and Dr. Kay on the sanatory state of the labouring classes before alluded to, the substance of which has been verified before them on examination (9). They cannot refrain from quoting a few lines from a paper laid before them by Dr. Southwood Smith, whose valuable evidence on the state of several districts of the east of London will be found well worth perusal. It is headed, "Abstract of a Report on the prevalence of Fever in Twenty Metropolitan Unions, during the year 1838," and is printed in the Appendix.

Dr. Smith (who has personally inspected the districts alluded to), shows by Returns stated, that in 20 metropolitan unions, giving nearly 14,000 cases of fever, above 9,000 were "afforded by seven of the unions only, namely, Whitechapel, Lambeth, Stepney, St. George-the-Martyr, Bethnal Green, Holborn, and St. George-in-the-East." These are at once the most populous and the poorest districts; and it is here that fever is "constantly committing its ravages. *It is utterly impossible for any description to convey to the mind an adequate conception of the filthy and poisonous condition in which large portions of all these districts constantly remain.*"

The Returns show that out of 5,692 cases of typhus in all the 20 unions, 4,002 were yielded by the seven unions specified as pre-eminently malarian districts.

Dr. Smith continues: "It appears that out of 77,000 persons who have received parochial relief, 14,000 have been attacked with fever; one-fifth part of the whole; and that 1,300 have died. It should be borne in mind that there is no disease which brings so much affliction on a poor man's family as fever; it commonly attacks the heads of the family, upon whose daily labour the subsistence of the family depends." The present Returns afford melancholy eviden e of the pauperising influence of this wide-spreading and mortal disease. *They show that while one-fifth of the whole pauper population in the year in question was attacked with fever, in Bethnal Green the proportion was one-third, in Whitechapel it was nearly one-half, and in St. George-the-Martyr it was* 1,276 *out of* 1,467.

"Placing out of consideration (continues our benevolent informant) the suffering of the individual attacked with fever, which however is one of the most painful maladies to which the human being is subject; placing out of view also the distress brought upon all the members of the family of the sick, it is plain that this disease is one of the main causes of pressure upon the poor-rates. That pressure must continue, and the same large sums of money must be expended year after year for the support of families afflicted with fever, as long as those dreadful sources of fever which encompass the habitations of the poor are allowed to remain. They would not, they could not be allowed to remain, if their nature were really understood, and if the ease with which the most urgent of them might be removed were known.

"But there do not appear to be any practicable means of removing them without legislative interference; and if the care of the public health be a part of the duty of the Legislature; if in the metropolis unions, which alone include a population of 851,000 souls, it be certain that conditions exist which are absolutely incompatible with the public health, and which conditions are to a very considerable extent removable; and if it shall be found that similar conditions exist in all the large towns in Great Britain, here would seem to be a proper and legitimate field for the exercise of legislative wisdom and power."

The prevalence of fevers and other diseases arising from neglect of due sanatory regulations, is by no means confined to the populous districts of the metropolis above described; but the same causes appear to produce the same effects,

(9) Reports on the Sanatory State of the Labouring Classes, &c. 1839.

effects, in a greater or less degree, in all our great towns (1). In some of them these evils, and the misery consequent upon them, is much increased by peculiar faults in the form and construction of the humble dwellings of the poorer classes. This seems owing to the want of all proper regulations in any general Building Act, applicable to the poorer class of houses in these crowded districts, for preserving due space and ventilation.

Thus in Liverpool there are upwards of 7,800 inhabited cellars, occupied by upwards of 39,000 persons, being one-fifth of all the working classes in that great town; and an account of undoubted veracity states, "that the great proportion of these inhabited cellars were dark, damp, confined, ill-ventilated, and dirty."

In Manchester also, nearly 15,000 persons, being almost 12 per cent. of the working population, live in cellars; and in the adjacent town of Salford, 3,300 (2). Such an habitation must almost necessarily be unhealthy, as it implies the impracticability of proper drainage and ventilation.

Another form of construction of houses for the working classes, which Your Committee considers highly injurious to the health of the inmates, prevails extensively in many large towns (3), and especially in Liverpool; viz. the position of rows of small houses in close courts, built up at the sides and end, and having only one entrance, frequently under a narrow archway.

The evils arising from this cause are much increased when it is found, as in Liverpool, that it is combined with another error in the construction of rows of these houses, viz. that they are placed back to back, so as to exclude the possibility of thorough ventilation.

It has been stated to Your Committee, that there are in Liverpool about 2,400 courts, chiefly of this construction, containing an estimated population of about 86,000 of the working classes, in addition to 38,000 living in cellars (4). Independent of this faulty construction, so injurious to the health of the inhabitants, the state of most of these courts is described as almost utterly neglected, with no underground sewers, and no attention to cleansing, with no inspection of any kind, and the surface gutters frequently almost choked with filth.

These courts are thus described by Dr. Duncan, an intelligent physician resident at Liverpool:—"Very few have an entrance wider than four feet, and that is by an archway built over it; the width is from 9 to 15 feet between the rows; there is one only six feet. The backs of the houses in one court are built against the backs of houses in another court; at the further end there is generally an ash pit between two privies; they are in the most abominable state of filth (5)."

It is scarcely possible to conceive any construction more prejudicial to the health of the inhabitants.

"The stench arising from these causes is such, in some of the courts, as to render it almost impossible to remain for any time in them."

2407. The great mortality of Liverpool is noticed (6), and a question is asked, "Do you know whether fevers have prevailed in Liverpool?" to which the answer is, "Yes, fever is the great complaint of these people."

Does

(1) As to Glasgow, Mr. Symons's evidence; Liverpool, Dr. Duncan's; Leeds, Dr. Williamson's; Manchester, Mr. Roberton's letter, &c. &c.; Mr. Fletcher's evidence.

(2) Report of Statistical Society of Manchester, 1838; Mr. Cobden's evidence; Mr. Riddall Wood's; Dr. Duncan's.

(3) *Vide* Mr. Pennethorne's evidence as to parts of London; Riddall Wood's, as to courts in Hull, &c.

(4) Dr. Duncan's evidence; Mr. Riddall Wood; Report Statistical Society of Manchester.

(5) Evidence, p. 142. *Vide* Plate, showing the form of these close courts.

(6) In 1839, one in 33½; Dr. Duncan, 2428.

"Does that arise in any measure from the want of ventilation and cleanliness in these dwellings?—*A.* There can be no doubt of that; I found fever most prevalent in those districts where there is most neglect of cleanliness and ventilation." 2408.

"Can you give any facts with respect to any particular localities where fever has been for a length of time, or where it frequently prevails?—*A.* I can state the average number of cases of fever attended annually by the dispensaries, and the proportion of those occurring in courts; the average number during the last five years was upwards of 5,000, exclusive of the cases occurring among the members of clubs and friendly societies, of which there are many in Liverpool; that is about one in 35 in all classes of the population; that in the courts is about two-fifths, and between one-half and one-quarter in the cellars (7)." 2410.

Again, it is said, "The proportion of cases of fever occurring among the inhabitants of cellars is about 35 per cent. more than it ought to be, calculating the proportion of the inhabitants of the cellars to the whole population; the mortality of Liverpool was last year one in 33½."

It appears that this kind of property is constantly increasing; is a very profitable and tempting investment; is the cause of great cost to the community, but contributes but little to the parochial burthens (8), as it is stated there are 16,800 cottages in the parish of Liverpool assessed under 12*l.* per annum, and of that number only 900 contribute to the rates, and their contribution is 700*l.* on a levy of 10,000*l.*

Your Committee would pause, from the sad statements they have been obliged to make, to observe, that it is painful to contemplate, in the midst of what appears an opulent, spirited, and flourishing community, such a vast multitude of our poorer fellow subjects, the instruments by whose hands these riches were created, condemned, for no fault of their own, to the evils so justly complained of, and placed in situations where it is almost impracticable for them to preserve health or decency of deportment, or to keep themselves and their children from moral and physical contamination; to require them to be clean, sober, cheerful, contented, under such circumstances would be a vain and unreasonable expectation (9). There is no building Act to enforce the dwellings of these workmen being properly constructed; no draining Act to enforce their being efficiently drained; no general or local regulation to enforce the commonest provisions for cleanliness and comfort.

It appears to Your Committee, that where such evils are found to follow from the neglect or inability in these respects of local authorities, that it is the duty of the Legislature to take efficient steps to protect so numerous and valuable a portion of the community.

These evils, arising from the malconstruction and crowded state of their dwellings; the absence of a good system of sewerage, and all adequate inspection and cleansing of the courts and alleys in which they reside, are found to exist in like manner in many parts of the metropolis, in Manchester, Leeds, Bradford, Glasgow, and other large towns.

Thus,

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(7) Dr. Duncan, p. 143.

(8) Page 145.

(9) With these facts before us, it is not surprising that the number of reckless and worthless characters should be considerable in Liverpool, viz. 1 in 45 of the whole population. The cost of those living on the public, and by other than honest means, is calculated annually at no less than 700,000*l.*—*Vide* Report of Commissioners on Constabulary Force, 1838, p. 18.

MANCHESTER. Thus, in Manchester, the capital as it may be called of the cotton trade (1), with a population of not less than 240,000 nearly 15,000 (2) of the poorer inhabitants, constantly inhabit cellars. Though the habitations of the working classes are described as better than those of Liverpool, the want of proper building regulations, and any effectual sewerage and cleansing, as applicable to the localities inhabited by the workmen, is most justly complained of (3).

Your Committee would here beg to quote a few lines from an able letter, which will be found in the Appendix, written by J. Roberton, esq. an eminent surgeon, residing at Manchester, to the Chairman. After adverting to the former disgraceful state of the streets and drains, he bears testimony to the zeal of the authorities in carrying on salutary improvements in these respects, "especially when it is known that no street can be paved and sewered without the consent of the owners of property, unless a certain large proportion of the land on either side is built upon. Owing to this cause, several important streets remain to this hour disgraceful nuisances.

"Manchester," continues the writer, "has no Building Act, and hence, with the exception of certain central streets, over which the Police Act gives the Commissioners power, each proprietor builds as he pleases. New cottages, with or without cellars, huddled together, row behind row, may be seen springing up in many parts. With such proceedings as these the authorities cannot interfere. A cottage row may be badly drained, the streets may be full of pits, brimful of stagnant water, the receptacles of dead dogs and cats, yet no one may find fault.

"The number of cellar-residences you have probably learned, from the papers published by the Manchester Statistical Society, is very great in all quarters of the town (4); and even in Hulme, a large portion of which consists of cottages recently erected, the same practice is continued. That it is an evil must be obvious, on the slightest consideration; for how can a hole underground, of from 12 to 15 feet square, admit of ventilation, so as to fit it for a human habitation?" "We have no authorized inspector of dwellings and streets."

After remarking that, when well fed, the families of working people maintain their health in a surprising manner, even in cellars and other close dwellings, he states, "That in 1833, 1834, 1835, 1836 (years of prosperity), the number of fever cases admitted into the Manchester House of Recovery, amounted to only 421 per annum; whilst, in two pinching years, 1838 and 1839, the number admitted was 1,207 per annum."

"It is," adds this benevolent gentleman, "in such a depressed state of the manufacturing districts as at present exists, that unpaved and badly sewered streets, narrow alleys, close, unventilated courts and cellars, exhibit their malign influence in augmenting the sufferings which that greatest of all physical evils, want of sufficient food, inflicts on young and old in large towns, *but especially on the young.*"

"Manchester," he adds, "has no public park, or other ground where the population can walk and breathe the fresh air, and, in this respect, is disgracefully defective, more so, perhaps, than any town in the empire (5)."

Your

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(1) The amount of property rateable to the relief of the poor in the borough of Manchester is 821,939 *l.*—*Vide* Return to Parliament as to Police, &c., May 1840, No. 311.

(2) 14,960, being 11 $\frac{3}{4}$ per cent. of the working population; and in the adjoining town of Salford, 3,335, being 8 per cent., p. 107–8, R. Cobden's evidence.

(3) *Vide* Report on the State of the Working Classes in a large Manufacturing District, the substantial accuracy of which account was verified before Your Committee, p. 107, and which comprises an account of towns inhabited by above 322,000 persons, including Manchester, Salford, Bury, Ashton, Staleybridge, and Dukinfield. *Vide* also Mr. Fletcher's evidence, 1264, &c.

(4) 14,960. *Vide* ante.

(5) Mr. Roberton's letter, in the Appendix.

Your Committee have dwelt longer on the state of Manchester and Liverpool than they should otherwise have done, because these great towns are so much supported by, and connected with, the cotton manufacture, which employs a greater amount of capital and workmen than any other in this empire, or, perhaps, in any quarter of the globe, and which is rapidly increasing in importance, and the number of persons occupied in it is constantly augmenting.

It seems alike a matter of duty and policy in the Legislature to take care that the industrious classes, by whose hands the great riches derived from this trade are chiefly formed, should be protected from evils (such as have been described), by the Government and the more opulent ranks, who owe so much to their unwearied exertions.

If from the great towns connected with the cotton trade Your Committee turn their attention to those where the population is chiefly employed in the woollen manufactures (the second in point of extent), they regret to have to report, that the evidence adduced before them shows nearly the same neglect as to any effective regulations to provide for the comfort, or insure the health of the labouring community.

Thus, in Leeds, with a population of above 80,000 persons([6]), the state of the streets, courts, and dwellings inhabited by the working classes appears greatly neglected; paving, sewerage, and cleansing (as applicable to the health and comfort of these workmen) seem seldom thought of, and never enforced. LEEDS.

The Report of the Statistical Committee of the Town Council of Leeds, giving a detailed account of the state of the town, has been fully confirmed by Dr. Williamson, a physician long resident in Leeds, and well acquainted with the facts; the details are given in evidence, p. 96, &c. A few extracts will give a sample of the rest.

Referring to the condition of one ward (a populous district) the question is put: "All the streets and dwellings in this ward are stated to be more or less deficient in sewerage, unpaved, full of holes, with deep channels formed by the rain intersecting the roads, and annoying the passengers, sometimes rendered untenantable by the overflowing of sewers and other more offensive drains, with ash-holes, &c. exposed to public view, and never emptied; or being wholly wanting, as is frequently the case, the refuse is accummulated in cellars, piled against the walls, or thrown into the streets; is that an accurate description?—*A*. It is an accurate description of the condition of the streets." 1677.

Referring to one neglected and filthy locality, the witness says, "From that yard I have reason to know cases of malignant fever are continually sent to our Fever Hospital." The district called the North East Ward (in which out of 16,269 inhabitants, 15,399 are of the working classes) is thus described: As containing numerous streets, "having dangerous excavations, bad drainage, little or no sewerage, here and there pieces of stagnant water, ash-holes exposed, out offices, without doors or seats, very unsafe," &c. p. 97. 1683.

Similar or worse accounts are given of various other districts, detailing the evils arising from houses built in close courts, often back to back, frequently with no thorough draught of air, without any conveniences for cleanliness or decency, with no effective drainage, inspection, or system of paving or cleansing.

The general conclusion of the Town Council is: "That the greater part of the town is in a most filthy condition, which demands an immediate remedy, a remedy which does not seem attainable under any local Act now existing, but 1708.

([6]) 123,390 in the town and liberties of Leeds in 1831, and the increase has been very great since that time

but calls for an especial enactment, which is doubtless required (they say) not only by Leeds, but more or less by every town in the empire."

1716. After referring to the evils constantly arising from the bad construction and position of their dwellings, the witness is asked: "Would it not then be of the first consequence to the welfare of the working classes, that there should be some general regulation laid down, either in a general Building Act or some Act generally applicable, not for interfering with the ordinary construction of houses, but for preventing their being built in such a form and manner as experience has shown is highly detrimental to the health of the poorer inhabitants?"—To which Dr. Williamson replies: "The working classes are now exposed to the cupidity and defective arrangements of their landlords, and they appear to me to require the protection of some such general enactment to remedy the evils." The necessity and practicability of such a remedy is spoken to by several other witnesses and experienced builders (6).

1749. The witness having stated that Leeds had doubled its population within 30 years, is asked, "During that time it appears from the report which you have confirmed, that no due provision and regulation has been made with respect to drainage, sewerage, and cleansing, ventilation and building, and for the supply of water for this vast community?—*A.* Certainly not." And the witness then expresses his opinion of the necessity of legislative assistance.

Your Committee have inquired into the state of several other densely-peopled towns, and refer to the evidence given respecting them, not thinking it necessary to enter into detail more than by stating, that they all appear to stand in need, more or less, of measures calculated to enforce sanatory regulations for the benefit of the humbler classes (7).

Birmingham. Your Committee are, however, happy to remark, that the great town of Birmingham, inhabited by so many industrious mechanics, so long celebrated for their skill and ingenuity, appears to form rather a favourable contrast, in several particulars, with the state of other large towns.

The nature of the employment generally appears not injurious to health; the general custom of each family living in a separate dwelling is conducive to comfort and cleanliness, and the good site of the town, and the dry and absorbent nature of the soil, are very great natural advantages. Still there are many regulations of great consequence to the health and comfort of the inhabitants which appear neglected (8), to some of which Your Committee will advert in the remedies they recommend. Some sanatory regulations respecting the common lodging-houses appear absolutely necessary for the safety of the community (9).

In addition to their inquiry into the state of many of the large towns of England, Your Committee also directed their attention to the condition of Dublin and Glasgow. With respect to the former, although many improvements may be made, and additional sanatory regulations are absolutely necessary, they do not think it necessary to do more than direct attention to the able evidence of Dr. Maunsell respecting it, containing many valuable suggestions.

Glasgow. With regard to Glasgow, however, they are sorry to observe that the details are of the most melancholy and afflicting nature. An intelligent witness, who

1090. has had every means of knowledge, states, "that penury, dirt, misery, drunkenness,

(6) *Vide* evidence of Mr. J. White, Mr. Allason, Mr. Green, Mr. Cubitt, &c.

(7) *Vide* evidence as to Bolton, population 50,000, Mr. Ashworth; Ashton, Staleybridge, and Dukinfield, population 60,000, Mr. Riddall Wood, Mr. Ashton; Bradford, population 90,000, Mr. Ellison, Dr. Williamson.

(8) There are many houses built back to back in the Bordersley district.—*Vide* Riddall Wood's evidence, 2270, &c.

(9) Evidence of Mr. Hodson, Riddall Wood, as to Hull, &c., p. 140.

enness, disease, and crime culminate in Glasgow to a pitch unparalleled in Great Britain." And in another place, "I did not believe, until I visited the wynds of Glasgow, that so large an amount of filth, crime, misery, and disease existed in one spot in any civilized country."

The witness was accompanied by the magistrates and heads of the police, and describes the want of ventilation, sewerage, cleansing, and attention to the health of the poorer inhabitants in the lower parts of the town as most grievous in its effects. The result is summed up in the following terms:—

"Such being the state of things (1) in large districts of Glasgow, it is not surprising that *the number of persons who died last year was* 10,270, *being at the rate of one in* $24\frac{6}{10}$ *to the whole population*, or that out of that number 2,180 *died of typhus fever, which never leaves Glasgow.*" These melancholy details, which can scarcely be read without shuddering, are amply confirmed by Dr. Cowan, a physician resident in the town, whose work, called "Vital Statistics," has been laid before Your Committee, and its general accuracy proved. It is there stated, and confirmed in evidence, that the rate of mortality in Glasgow has increased most rapidly, and is thus given in round numbers: 1821, 1 in 39; 1831, 1 in 30; 1835, 1 in 29; 1838, 1 in 26; thus showing the frightful increase from 1 in 39 to 1 in 26 in 17 years (2). 1089.

And, again, it is shown that the mortality in children under 10 years of age has risen from 1 in 75 in 1821 to 1 in 48 in 1839. "Fever, it is stated, has been gradually increasing in the city of Glasgow, and its victims constitute within a fraction of 55 out of every 100 patients treated in our hospitals." "This increase has been during a period of great prosperity." The report quoted goes on to say, "We may safely assume that the 12,895 individuals treated in the fever hospitals during the last seven years, all, with few exceptions, depending on their daily labour, and extending the benefit of that labour to others, were out of employment for a period of six weeks." 1115. 1137.

Dr. Cowan adds, "The mortality bill of 1837 exhibits a rate of mortality inferring an intensity of misery and suffering unequalled in Britain, and not surpassed in any town we are acquainted with on the Continent of Europe." Remedial measures are suggested in the following words: "A few thousand pounds judiciously expended in opening up the districts most densely populated, and in other obvious ways, would greatly tend to alleviate the pressure of our heaviest municipal tax, the fever tax." 1153. 1140.

Your Committee would now turn from the melancholy details, a portion of which they have thought it right to insert in their Report, and would state generally, that although the main evils complained of, and proved before them, appear to arise from the want of any regulations as to buildings and ventilation, and the deficiency in sewerage, cleansing, and other sanatory provisions, yet there appears to be some important improvement necessary referable to especial sources of illness in certain districts, as particularly, 1st, The existence of burial places in the midst of populous neighbourhoods (3).

2d, Local nuisances from some noxious business, affecting the health of the vicinity (4).

3d, The neglected and dangerous state of low lodging-houses, frequented by a wretched and migratory population, who often carry fever and other disorders into distant districts (5).

Independent

(1) It appeared two-thirds of the children between 3 and 12 received no instruction whatever, 1101.

(2) J. C. Symons, p. 63, Q. 1114.

(3) *Vide* Mr. Walker's evidence, also Dr. Arnott's.

(4) *Vide* Mr. Moseley's testimony.

(5) *Vide* statement of Mr. Riddall Wood, Hodson, Dr. Williamson, &c.

Independent of the physical evils to the working classes arising from the causes before adverted to, Your Committee are desirous to express the strong opinion they entertain, confirmed by the testimony of many of the witnesses examined, that the dirt, damp, and discomfort so frequently found in and about the habitations of the poorer people in these great towns, has a most pernicious and powerful effect on their moral feelings, induces habits of recklessness and disregard of cleanliness, and all proper pride in personal appearance, and thereby takes away a strong and useful stimulus to industry and exertion (6).

The wife, hopeless of being able to make his home comfortable to her husband, abandons all endeavours for the purpose, neglect leads to neglect, recrimination follows reproof, and their children are brought up amidst dirt and wretchedness, with the example of constant domestic disputes before them. Nor can it be doubtful to those who trace the effects of such causes, that the humbler classes are often induced or driven by the want of comfort at home, and by the gloomy prospect around them, to have recourse to dram-drinking, the fertile parent of innumerable ills (7).

Your Committee have thus laid before The House an imperfect abstract of the facts proved before them in evidence, showing the neglect of due sanatory regulations applicable to improve the health and increase the comfort of great bodies of the poorer classes.

They have traced a few of the more prominent evils which appear to spring from this neglect, and have endeavoured to show the ill effects produced by these causes in degrading the character of their humbler fellow-subjects, in producing crime, disease, and discontent, and in counteracting in great measure (as regards the younger portion of the population) those moral and religious impressions which they might otherwise receive from education where it is afforded to them (8).

The cost to the country, arising from these combined causes, it might be difficult to estimate with exactness, but there can be no doubt that it is
1139. enormous. Thus it is estimated that every person in the Fever Hospital (12,895 in seven years) in Glasgow loses six weeks employment, which, calculated at 7*s.* 6*d.* per week, would amount to 29,004*l.* lost to the community, besides the cost of attendance and support; this has been calculated, *where the patient recovers*, at 1*l.* per case (9), and adds here 12,895*l.* to the account of loss; chiefly owing to the want of proper sanatory regulations.

In proportion as the working classes in these great cities (rapidly increasing every year) and their children are injuriously affected in their physical condition and their moral characters by the causes alluded to, just in that proportion will their value to the community be diminished, and their cost to the kingdom increased. The property which the country has in their useful labours will be so far lessened, and the unproductive outlay necessary to maintain and restrain them so far augmented.

This consideration will not be thought beyond the province of Your Committee when it is remembered that in the remedies they propose some outlay of expense must necessarily occur; yet on reflection it is hoped that they will be justified in the conclusion they have come to, that ultimately a great saving to the community will thereby take place; and even were that not the case, that some such measures are urgently called for, as claims of humanity and justice

(6) On this point *see* the evidence of Drs. Duncan, Williamson, Arnott, S. Smith, Maunsell, Fletcher, &c.

(7) The increase of consumption of spirits in Great Britain and Ireland has been from 9,200,000 gallons in 1817, to 29,200,000 in 1837; and the number of criminal commitments in England and Wales from 4,600 in 1805, to 22,000 in 1838.—*Vide* Returns to Parliament.

(8) *Vide* evidence of medical men examined; also Messrs. Pennethorne, 2885, and Fletcher

(9) Report on Sanatory State of Labouring Classes about the Metropolis, p. 6.

justice to great multitudes of our fellow men, and as necessary not less for the welfare of the poor than the safety of property and the security of the rich (1).

Remedies.

Remedies. The remedies which Your Committee would propose in order to carry out the spirit of "Sanatory Regulations for the benefit of the Inhabitants of the Great Towns of the Realm," are several; some of a prospective, and others of a retrospective operation.

The first measure they recommend is, a general Building Act, applicable to towns now, or at any future time, comprizing a certain amount of population; laying down regulations respecting the construction of certain rates of houses (well understood among builders) which are fitted for the dwellings of the working classes.

The regulations would be framed so as to interfere no farther with every one's right to manage his own property than was necessary to protect the health of the community; nor would they extend beyond what the necessity of that urgent duty of Government justified. Such regulations would fall strictly under that rule of public law universally acknowledged, which lays down as a maxim, "*Sic utere tuo ut non alienum lædas.*"

These regulations would forbid and prevent such forms of construction specified, as experience and undoubted testimony show to be inconsistent with health. These would embrace,

1. Cellar dwellings, unless with areas in front and back, and with sewers below the level of the floors.

2. Rows of houses erected in close courts, built up at the end.

3. Rows of dwellings built back to back, so as to prevent any thorough ventilation.

These regulations so far would be of a preventive character, and would not otherwise interfere with the discretion of builders.

There are, however, a few other rules which ought to be introduced into such an Act; one of the most important is, to require that before and behind every row of houses of this description a certain space should be left open, proportioned to the height of the houses. What this proportion should be would be matter of consideration. Experienced builders, who have given evidence before Your Committee (and who are unanimous in opinion as to the necessity of such a provision) (2), differ slightly as to details, one proposing the space in front should be the height of the houses themselves, whilst another thinks two-thirds might be sufficient; and in like measure with regard to the space necessary to be left open at the back of these small houses.

Some provisions have likewise been suggested as proper to be inserted in a Building Act, which might insure to these humble classes of houses such conveniences as are absolutely necessary for health and decency, and such receptacles for refuse, ashes, &c., as cannot be dispensed with consistent with cleanliness

(1) "The mortality of cities in England and Wales," says a valuable authority, "is high, but it may be much reduced. A good general system of sewers, the intersection of the dense crowded districts of the metropolis by a few spacious streets, and a park in the east end of London, would probably diminish the annual deaths by several thousands, prevent many years of sickness, and add several years to the lives of the entire population. Similar improvements would have the same effect in the other cities of the empire; the poorer classes would be benefited by these measures, and the poor-rates reduced. But all classes of the community are directly interested in their adoption, for the epidemics which arise in the east end of the town do not stay there; they travel to the west end, and prove fatal in wide streets and squares."—Mr. Farr, Appendix to Report of Registrar General.

(2) *Vide* evidence of Messrs. White, Smith, Cubitt, Allason, &c.

liness and comfort. There should also be a sufficient underground drain communicating with the common sewer.

Some other beneficial provisions may probably be sanctioned as proper for a general Building Act; but these are the only new provisions which appear to Your Committee essentially necessary for the welfare of the working classes.

Regulations as to the thickness of party walls, to hinder the spread of fires, and others to prevent overhanging projections and dangerous chimneys, are now in the Building Act applicable to the metropolis, and probably in some provincial Acts, and would of course be necessary.

In these suggestions Your Committee have kept in view the policy of interfering as little as possible with private property, and no farther than the strict necessity of the case justified.

There is in the evidence abundant proof of the absolute want of some such provisions, and of the wide-spread evils and misery resulting from their neglect. They are in the nature strictly of sanatory regulations, and are only the fulfilment of one of the first duties of a humane Government, to protect those who cannot protect themselves (3).

It is matter of deep regret to Your Committee that some such Act as they suggest did not engage the attention of Parliament at the beginning of the century, before our great towns were so densely populated, and so many dwellings for the working classes had been built in contravention of the proposed rules; had such been the case, they cannot doubt but much of the discomfort and sufferings which have been detailed before them would have been prevented.

Your Committee are informed that some years since a general Building Act, which would probably have contained some regulations like those they recommend, was under the consideration of the Government; but, amid the changes which subsequently took place, was laid aside (4).

The obvious necessity of some such enactment, arising from the evils detailed before Your Committee, might perhaps justify them in simply but earnestly recommending it to the consideration of Parliament; but feeling, as they do, the great importance of its speedy adoption for the benefit of a rapidly increasing and valuable class of their humbler fellow-subjects, they are induced to consider and reply to some objections which might be brought against it.

It may be said, that such regulations as have been spoken of, forbidding buildings being erected in certain forms considered prejudicial to health, is an interference with private property. This is doubtless the case, but appears to be amply justified on the plea of the general good; and the same necessity is constantly held to justify similar interference, in various Acts of Parliament for the construction of roads, railways, canals, and in the enforcement of regulations regarding police, quarantine, &c.

A more serious objection is, that such regulations, by throwing some difficulties in the way of erecting closely-packed dwellings for the working classes, would render them dearer than at present, and increase the difficulty which they often find to procure habitations in populous cities. With respect to such part of the proposed regulations as would insure a better arrangement of dwellings on the same space (as by insuring courts and streets to be open at each end), this objection would not apply. But undoubtedly the effect of some of the rules suggested for a Building Act would be to improve the dwellings of the working classes, but at a greater cost than before.

The evidence, however, of experienced builders leads Your Committee to believe that this cost would not be very materially increased by prospective regulations

(3) *Vide* evidence of Messrs. J. White, Pennethorne, T. Allason, Smith, Cubitt, &c.; Drs. Duncan, Williamson, &c.

(4) *Vide* Mr. J. White's evidence.

regulations of the nature described. The cost of a little increased space of ground before it is built upon, and before additional value is given to it by the proximity of manufactories, shops, roads, and streets, is very different and much less than afterwards; but the rules suggested would apply to it when open, and thus comparatively of less cost (5).

The outlay on the houses themselves in construction and materials (which are the main points of cost) might be the same, whether there are 20 or 15 on the same number of square yards; yet the effect on the health and comfort of the inmates would be very different in one case from the other. Still it must be admitted, that if a larger space of ground is required for a given number of dwellings, and they are constructed in a better and more costly manner, and have appendant to them some conveniences which they are now without, that the rent to be paid for them must be somewhat higher; but Your Committee assert with confidence, that this addition will be amply compensated to the working classes by the additional convenience and comfort they will enjoy, and that they will gain in freedom from disease, which now so frequently attacks them and their children, a saving greatly exceeding their outlay (6). The chief property of these persons is their labour. The evidence shows how often this is interrupted by fevers and other disorders, arising from the causes adverted to. Regulations, therefore, which may protect them from these evils, and allow them the uninterrupted advantage of the wages derived from their labour, would more than make up to them some augmentation of rent.

It must be borne in mind that without some such improvement in the construction of his dwelling, and the conveniences appendant to it, as are suggested, it is almost impossible for a working man's home to be made comfortable, or to have any attractions for him, or that he can in any way make the most of his daily earnings, and he is thereby driven to drinking as a resource, as is stated by many witnesses examined.

General Sewerage Act.

Another remedial measure, which appears to Your Committee absolutely necessary to facilitate proper sanatory regulations in great towns, is a general Act for the sewerage of these densely-peopled communities.

At present these Acts are partial in their operation and extent, varying in their provisions, and very defective in the powers they give.

Sewerage and Drainage.

A reference to the evidence collected by Your Committee will show how great has been the neglect of the sewerage and drainage in some of the most densely-peopled parts of London, and the large provincial towns, and how much misery and disease have been entailed on the poorer classes of inhabitants in consequence. It cannot be denied, however, that considerable attention has been directed to this point within the last 12 years, and that great improvements have been effected during that period; still the want of any general system of operation, and the defective powers possessed by the commissioners, both in the metropolis and country towns, in which they have been established by local Acts, have altogether prevented the extension and construction of sewers upon a scale commensurate with the increase of population. Your Committee cannot help repeating their conviction, that, in addition to the physical evils which this want of the means of carrying off the refuse and impurities from their dwellings entails upon the poorer classes, it is impossible to deny, from the evidence before them, that their moral habits are affected by the same

(5) *Vide* Mr. Cubitt's evidence, and Mr. Smith's.

(6) The improvement of their general character would make them better tenants, less likely to injure their habitations, more punctual in their payments, and by giving less trouble, and requiring less watching, compensating for some little additional outlay.

same causes. That a constant residence in a tainted and polluted atmosphere, whilst it predisposes them to disease, and renders them less able to repel its attacks, also produces a degradation of moral character, an indifference to the common decencies of life, and an utter recklessness of all those comforts which persons in their station might be expected to enjoy (4).

The effect of this utter prostration of energy, and of all the better feelings of the mind, has been to reduce multitudes, who might otherwise have passed with credit through their humble spheres, to have recourse to ardent spirits as a desperate alleviation of their wretchedness; and Your Committee need hardly point out, how surely this irresistible temptation leads, step by step, to habitual dissipation and debauchery (5).

Your Committee are perfectly aware, that wherever large masses of the labouring orders are collected together in towns, it is almost hopeless to enforce that strict attention to household cleanliness which is maintained amongst those of the same rank in rural districts; but it is for this very reason, and to counteract this unfortunate tendency to a neglect of cleanliness and comfort, that Your Committee deem it essential that every practicable means should be adopted to provide, at all events, against the worst of the evils detailed in the evidence before them, and, by due sanatory regulations, to place the poorer classes in a condition to avail themselves, by a little exertion, of those conveniences which experience has proved necessary to remove the accumulated impurities of large towns.

Board of Health.

In pursuance of these principles, and with the view of affording to the poorer classes congregated in towns some protection from the evils to which, from the confined nature of their dwellings, and the cupidity of speculators, they are frequently exposed, Your Committee are of opinion that it would be advisable to establish, in every town containing a population of a certain amount, a Board of Health, whose duty it should be to examine into such circumstances and occurrences within their district as are prejudicial to the general health of the inhabitants; to call the attention of the Commissioners of Sewers, and any other local authorities that might be concerned, to such nuisances, and to devise and suggest remedies(6). They should report their proceedings annually to the Central Board of Health, if such a Board be constituted, and if not, to the Secretary of State for the Home Department, for presentation to Parliament, by which means publicity would be insured to their proceedings, and much useful information collected and diffused. These Boards of Health might be appointed by the Boards of Guardians, or by the Town Councils in corporate towns, or directly by the rate-payers.

It is obvious that a portion of such Boards should always consist of members of the medical profession, and Your Committee are inclined to think, that a class of persons peculiarly pointed out by the nature of their avocations for a duty of this sort, are the practitioners attached to the Poor Law Unions, who, being in the daily habit of visiting the most destitute and neglected portion of the

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(4) It seems almost impossible for a poor but decent family, coming to reside in one of those close neglected situations (so frequently described in the Evidence), to preserve any good habits which they or their children may have acquired; evil example, and close contact with those who are careless as to appearance, will soon reduce them to the common level.

(5) In the official circular isssued by the Poor Law Commissioner on the 9th March last, it is stated, p. 11, that nearly 24 millions (about four times the amount expended in poor-rates) is annually spent in ardent spirits, chiefly consumed by the labouring classes; and by a calculation made by Mr. J. C. Symons, one of the witnesses before your Committee, Q. 1087, it appears that the quantity of spirits consumed in England is 7 $\frac{1}{9}$ pints per head, in Ireland rather more than 13 pints, and in Scotland 23 pints, per head per annum.

(6) Dr. Arnott's Evidence, p. 37.

the community, must become acquainted with the condition of the localities in which they reside, and with the prevalence of those disorders which result from the absence of public sanatory regulations.

Such Boards of Health would probably each have a clerk (paid for his services), whose duty it would be to make minutes of the proceedings, and give such returns, in a short tabular form, as might be useful for reference, and important as affording easy information on a subject of such vital interest to the people.

The principal duty and object of these Boards of Health would be precautionary and preventive; to turn the public attention to the causes of illness, and to suggest means by which the sources of contagion might be removed; and in this way Your Committee believe a great saving of expense would take place eventually, and that the necessary outlay would be compensated by the diminution, not only of suffering, but of actual cost to the community.

Your Committee have next to suggest that facilities be afforded for the establishment in towns and newly-extended suburbs of an administrative authority for drainage and sewerage, without the necessity of incurring the expense and delay of a local Act.

General Sewerage Act.

This desirable object might be effected by passing an Act for this country, framed upon similar principles to the 9 Geo. 4, c. 82, which is restricted to Ireland, and by which, on the requisition of 21 householders, a public meeting may be called of all the inhabitants of houses rated at 5*l.* and upwards; this meeting is empowered to decide upon the appointment of commissioners in whom are vested the necessary powers for the cleansing, draining, paving, and lighting of the town. This Act has been already adopted in about 60 towns with general satisfaction. Your Committee think it would be a good arrangement that these rates should be borne by the landlord, and that some facilities for that purpose should be given.

Your Committee have been informed that doubts exist as to the powers possessed by some Commissioners of Sewers of constructing new sewers, they therefore recommend that the continuance of these doubts be obviated; and also that some additional powers, which appear absolutely necessary for remedying the evils which they have stated, be granted to existing Commissions of Sewers, as well as to those which may hereafter be constituted (7).

1. That of enforcing adequate sewerage for rows or streets of houses which may hereafter be erected; the expense of construction to be mainly charged upon the proprietors of the houses, while that of future repairs will fall upon the general rate of the district.

2. That of enforcing a communication between private dwellings and the adjacent main sewer, at the expense of the proprietors of those dwellings, and the repairs to be placed under the superintendence of the officers employed by the Commissioners of Sewers.

3. That of prohibiting the sinking of cess-pools below the level of the main sewers, and any other similar powers which may be deemed necessary for the public benefit.

Inspector.

Your Committee believe it would also be of the greatest advantage to the inhabitants of great towns if an inspector was appointed to enforce the due execution of sanatory regulations. They think such an officer should (whether appointed by the rate-payers, or the guardians of the poor whom they have chosen,) have the power of proceeding by indictment to abate nuisances, an old remedy of the English law, which, though somewhat in disuse, it seems quite necessary to revive and extend, to prevent and put down injury to multitudes

(7) *Vide* evidence of Mr. Peeke, 2024; Mr. Baker, 1580; Drew, 1519, &c.

tudes (1). At present, for want of some such guardian of public rights, they are continually encroached upon, and nuisances injurious to the health, comfort, and property of the people (especially of the humbler classes) are shown by the evidence adduced before the Committee to be constantly increasing. It would be the duty of such an officer to prevent any encroachment on or diversion of highways, or open spaces of ground in the enjoyment of the public.

Your Committee think that the inspector should report from time to time the state of his district to the Board of Health, constituted as before suggested.

Your Committee have thus given an outline of the principal remedial measures they propose. They have been obliged to detail these at considerable length, which is perhaps inseparable from the magnitude and importance of the subject.

Before, however, they conclude their Report, they would state that there are several points of the utmost consequence to the health of the inhabitants of our great towns, which they content themselves with barely enumerating, because they feel assured that if the remedial suggestions they have made were acted upon, these matters would immediately be attended to.

Thus, if the legislative enactments suggested were passed, if Boards of Health and district inspectors were appointed, there can be little doubt that these subjects would soon attract the attention their importance deserves, and if legislative aid were wanted, it would in such case be promptly afforded.

1. The custom of continuing burying-grounds, crowded with constant additions of corpses, in the midst of populous cities, is spoken of by several witnesses as most injurious to health (2).

2. The importance of an ample and due supply of water within the reach and means of the humbler classes has been made evident to all who have attended to the subject, and appears lamentably deficient in several populous and increasing communities.

3. The augmentation of buildings in the vicinities of these crowded cities seem to call for provisions to insure some open spaces being preserved, calculated for public walks, essential to the health and comfort of the poorer classes. This was adverted to and recommended by the Report of a former Committee (3); it presses more and more as the population of these great towns rapidly increases, and many witnesses have spoken of the growing necessity for some such provision (4).

4. Some inspection and power of regulation of the humbler class of lodging-houses seems absolutely necessary for the health of the people. They are shown, by evidence before Your Committee, to be now utterly neglected; that there are many in all our great towns habitually in a filthy condition, the abode of fever and other contagious disorders, destitute of all sanatory regulations, and inhabited from time to time by a migratory and shifting population. Thus the diseases which are frequently taken in these dirty and ill-ventilated places are spread about the country, to the manifest danger of the people.

5. Wherever local circumstances give the power to establish public bathing places for the use of the poorer classes, such a step would be highly beneficial, the

(1) *Vide* cases of nuisance, evidence, Messrs. Moseley and Cubitt's.

(2) *Vide* especially Mr. Walker's.

(3) *Vide* Report of Committee on Public Walks in the vicinity of populous Cities, 1832, and Mr. Fletcher's evidence, 1316.

(4) The necessity of some play-grounds adjacent to the schools frequented by the children of the poorer inhabitants in great cities, is spoken to by almost every medical witness; the advantage in moral effect of relaxation from constant confinement is insisted on by all whose attention was directed to the subject.

and the cost in manufacturing towns, where many steam-engines are employed, would not, it appears, be considerable ([5]).

Your Committee have now nearly completed their outline of the sanatory regulations they recommend to the consideration of Parliament to prevent as far as practicable the recurrence and increase of circumstances highly injurious to the health and comfort of the inhabitants of our great towns and populous districts.

They cannot, however, conclude the task assigned to them, without endeavouring to suggest some method by which the existing evils may be somewhat removed, and the extent of suffering diminished.

It will be evident to any one who has considered this Report, or looked into the evidence on which it is founded, that much of the unhealthiness of particular groups of dwellings, and sometimes of a whole district, arises from the want of some local improvement ([6]), in the removal of some obstruction to ventilation or drainage.

Thus, in some of the crowded and unhealthy places described, the opening of a fresh thoroughfare, giving light and air, would not only remove or abate the evil, but would give additional value to the property through which it passed.

Sometimes taking down a single house which blocked up the end of a street, or of one of those miserable courts described in the evidence, would greatly benefit all the others near ([7]), and add to their worth much more than their fair share of the cost of the whole improvement; or the case may be that the additional value given to the dwellings in the immediate vicinity of the proposed sanatory improvement would very nearly, if fairly estimated, cover the expense, requiring a small proportion only to be made up from some other fund.

This supposition may be varied in other ways, and is applicable to other improvements of almost any description, by which additional value is given in different proportions, to private property, and at the same time the salubrity of the vicinity is increased.

Yet at present, however necessary for health or beneficial to private property such improvements may be, they cannot be effected, unless in each spot there be a special Act of Parliament for the purpose, which is the case in very few places. Where, however, such an Act exists, it is generally applicable only to particular improvements specified in the Bill; it only extends to cases where some fund already exists for defraying the expenses, and it gives no power of assessing the whole district benefited, or of appointing apportioners to decide in what proportions the immediate vicinity is augmented in value, and ought to be assessed in consequence. Thus, a single obstinate and unreasonable proprietor may, and frequently does, prevent an improvement beneficial to a whole neighbourhood, and even to himself; but if all the persons interested be willing to concur in the improvement, there are frequently legal disabilities which prevent their consent being available, as leases, entails, &c. Sometimes the power of exchange or sale, or long leases of a small portion of a settled property, would facilitate an improvement widely beneficial, but this now requires in each case a separate Act of Parliament ([8]).

Viewing, therefore, the necessity and advantage of such local improvements, and the difficulties which now prevent them, Your Committee beg to recommend

([5]) *Vide* Mr. Sowten's evidence; also Mr. Fletcher's, p. 74, 1305.
([6]) *Vide* evidence, 1140. 2539, &c. Mr. Pennethorne's, p. 170.
([7]) *Vide* Dr. Duncan's evidence, p. 151. 2539, &c.
([8]) *Vide* Report of Committee on Public Walks, evidence of Mr. J. White, &c.

General Act to aid Local Improvements.

mend the introduction of a general Act (extending to all towns above a certain population) to facilitate such improvements. They venture to suggest that such an Act should contain provisions calculated to obviate the difficulties pointed out; that it should lay down well-considered regulations as to the forms of proceeding; should enable willing parties to carry out beneficial alterations; should empower a certain majority (perhaps two-thirds) of the rate-payers of any district to adopt the provisions of the Act, and bind the minority; empower them to choose trustees or commissioners to fulfil the enactments, raise rates, purchase property, complete improvements, &c.

Your Committee cannot but wish that such an Act, so essential to the welfare of these densely-peopled districts, should contain clauses to facilitate the commencement of public improvements necessary for health at the suggestion of the Board of Health, and for this purpose that, under due provisions, the Board should have the power of ordering surveys and estimates to a limited amount. Your Committee also think that wherever the Government, individuals, or any public body shall be willing to provide a certain proportion (as one-fourth or one-third) of the estimate of any such improvement, that there should be a power to enable such Commissioners to raise a rate for the remainder. In this way they believe many spirited and benevolent persons would generously come forward to assist and stimulate such beneficial public improvements, which without some such facilities and provisions will never be made.

How far it might be advisable to enable the Lords of Her Majesty's Treasury, in certain urgent cases, to advance on good security loans of Exchequer Bills to facilitate such improvements, Your Committee will not undertake to determine.

Your Committee have thus ventured to recommend legislative measures to assist in the necessary work of laying down and enforcing sanatory regulations for the benefit of the inhabitants of the large towns of this realm. They cannot conclude this Report, which they submit to the consideration of The House, without most earnestly recommending all those who, by fortune, station, or trust, are placed in a position to assist in carrying out these views, to exert themselves to the utmost, and without delay, in aiding the improvement suggested in their several towns and neighbourhoods. Whilst Your Committee is earnestly desirous legislative aid should be given, they are yet aware, that with zeal, energy, and perseverance much might be done, even with the present imperfect powers, by individual and combined exertion, to lay the foundation of measures which would afterwards be extended and perfected to the permanent benefit of the community.

17 *June* 1840.

PROCEEDINGS on the Days in which no Witnesses were Examined.

Lunæ, 23° *die Martii*, 1840.

PRESENT.

Mr. Slaney.	Mr. Richard Walker.
Mr. Cowper.	Mr. Baines.
Mr. Ingham.	Mr. Brotherton.
Mr. Tufnell.	Mr. W. Patten.
Mr. Greene.	Mr. J. Ponsonby.
Lord J. Stuart.	

Motion made (Lord J. Stuart)—That Mr. Slaney do take the Chair.—Agreed to.

Committee deliberated on course of proceedings.

[Adjourned to Wednesday, Twelve o'clock.

Lunæ, 15° *die Junii*, 1840.

Mr. SLANEY in the Chair.

Mr. Vigors.	Mr. Cowper.
Mr. Oswald.	Mr. Greene.
Lord J. Stuart.	Mr. Tufnell.
Mr. Mackinnon.	

Report further considered, and agreed to.

Ordered to report.

LIST OF WITNESSES.

Mercurii, 25° *die Martii*, 1840.

	Page
Thomas Southwood Smith, M. D.	1
Jordan Lynch, M. D.	12
Mr. Samuel Byles	15
Mr. Robert Heelis	20

Veneris, 27° *die Martii*, 1840.

Mr. Edward White	25
John Wood Wilkes	28
Mr. John Clarke	29
Neil Arnott, M. D.	32
Mr. Edward Evans	39
Mr. Matthew French Wagstaffe	42
Mr. Samuel Miller	47
Mr. Francis Moseley	49

Lunæ, 30° *die Martii*, 1840.

Mr. Francis Moseley	55
Jelinger C. Symons	60
Charles Richard Weld, Esq.	67
Joseph Fletcher, Esq.	69

Mercurii, 1° *die Aprilis*, 1840.

Mr. J. W. Unwin	77
Mr. Beriah Drew	83
Mr. William Baker, jun.	87
Mr. Joseph Ellison	88
Joseph Fletcher, Esq.	92

Veneris, 3° *die Aprilis*, 1840.

Dr. James Williamson	96
Richard Cobden, Esq.	106
Edmund Ashworth	108

Lunæ, 6° *die Aprilis*, 1840.

Dr. James Williamson	112
Mr. J. Ellison	118

	Page
Dr. James Simpson	118
John Riddle Stodhart, Esq.	120
Mr. James Peeke	121
Mr. John Newman	126
Mr. James Riddall Wood	128

Mercurii, 8° *die Aprilis*, 1840.

Mr. James Riddall Wood	136
William Henry Duncan, M. D.	141
John White, Esq.	151
Thomas Ashton, Esq.	154

Veneris, 15° *die Maii*, 1840.

George Smith, Esq.	156

Lunæ, 18° *die Maii*, 1840.

George Samuel Jenks, M. D.	163

Veneris, 22° *die Maii*, 1840.

James Pennethorne, Esq.	166
Thomas Allason, Esq.	172
Joseph Hodgson, Esq.	176
William Henry Miller, Esq. M. P.	180

Martis, 26° *die Maii*, 1840.

Mr. William Sowten	183
George Alfred Walker, Esq.	185

Veneris, 29° *die Maii*, 1840.

Henry Maunsell, M. D.	189
Mr. Thomas Cubitt	204

Jovis, 4° *die Junii*, 1840.

George Alfred Walker, Esq.	211

MINUTES OF EVIDENCE.

Mercurii, 25° *die Martii*, 1840.

MEMBERS PRESENT.

Mr. O'Brien.	Mr. Ponsonby.
Mr. Brotherton.	Mr. R. A. Slaney.
Mr. Cowper.	Lord James Stuart.
Mr. Ingham.	Sir Harry Verney.
Mr. Wilson Patten.	Mr. R. Walker.

R. A. SLANEY, Esq. IN THE CHAIR.

Thomas Southwood Smith, M.D. called in; and Examined.

T. S. Smith, M.D.

25 March 1840.

1. *Chairman.*] YOU reside at No. 36, New Broad-street, do you not?—I do.

2. You are physician to the London Fever Hospital, are you not?—I am.

3. You are well acquainted with the state of the dwellings of the poorer classes in the neighbourhood of Bethnal-green and Whitechapel, and the Eastern part of London?—Yes, I am very well acquainted with their condition, for I have been physician for many years to the Eastern Dispensary, which extends over a large portion of those districts, and I have likewise made a special examination of both Bethnal-green and Whitechapel, at the request of the Poor Law Commissioners, and of which I have given them a Report.

4. The Report you speak of is contained in "A Report on the Sanitary State of the Labouring Classes, as affected chiefly by the Situation and Construction of their Dwellings in and about the Metropolis"?—Yes.

5. That has been published in the Fourth and Fifth Annual Reports of the Poor Law Commissioners, and also in a separate form?—It has.

6. In turning to that, in page 31 there is a statement of your report upon those districts; and in the first part of it you state generally the causes of fever, and the evils arising from the neglect of drainage, sewerage, proper ventilation, and the want of cleanliness in the immediate neighbourhood of those densely-peopled districts?—Yes.

7. In the second paragraph, after adverting to the evils arising from the want of forethought and prudence, you state, "There are evils of another class, more general and powerful in their operation, which can be avoided by no prudence, and removed by no exertion on the part of the poor. Among the gravest, and at the same time the most remediable of these latter evils, is the exposure to certain noxious agents generated and accumulated in the localities in which the poor are obliged to take up their abode, and to the pernicious influence of which they are constantly, and for the most part unconsciously subjected"; that is your opinion?—It is.

8. Further on, at the bottom of the 32d page, you say that "The records of the London Fever Hospital prove indubitably that there are certain localities in the metropolis and its vicinity which are the constant seats of fever, from which this disease is never absent, though it may prevail less extensively, and be less severe in some years, and even in some seasons of the same year than in others"; that is your opinion?—Yes; it is so clearly the case, that if you were to take a map and mark out the districts which are the constant seats of fever in London, as ascertained by the records of the Fever Hospital, and at the same time compare it with a map of the sewers of the metropolis, you would be able to mark out invariably and with absolute certainty where the sewers are, and where they are not, by observing where fever exists, so that we can always tell where the Commissioners of Sewers have not been at work by the track of fever.

T. S. Smith, M.D.
25 March 1840.

9. You might make that out in the same manner as we do geological districts, fever districts, or sewer districts?—Yes. In the sewer district there is a most remarkable absence of fever, and in the fever district a most remarkable absence of sewerage.

10. You proceed to state, that among the most remarkable districts where it prevails are St. Clement Danes, viz. Drury-lane, White Hart-yard, Newcastle-court, Clare-market, and the whole neighbourhood; St. Giles and St. George, Bloomsbury, viz. the whole neighbourhood of King-street, Charles-street, Lawrence-street, Short's-gardens, Seven-dials, and the lanes leading towards Long-acre, &c.; St. Andrew's, Holborn, viz. all the narrow streets, lanes, alleys, and courts in the Holborn Union; large portions of St. James, Clerkenwell, St. Luke, Shoreditch, Bethnal-green, Whitechapel, St. George's in the East, Stepney, Tower Hamlets, City of London Union, St. Saviour's Union, Lambeth; St. Mary, Battersea, and Wandsworth Union, &c. In all those districts fever prevails more or less, or has done; and, as it would appear from your statement, the drainage and sewerage has been in a great measure neglected?—Yes, very much neglected. No common sewers, at least there are no underground sewers going from those narrow courts and alleys into the common one; but whatever drainage there is, is mere surface drainage, and often there is nothing of that even.

11. The neglect of which you speak prevails most amongst the poorest dwellings, where the people, from other circumstances, are less able to sustain themselves against any affection of fever?—Invariably.

12. Therefore, in the districts where care is the most requisite, and guard against fever or those maladies arising from putrid substances is most necessary, it is most neglected?—Exactly, and that is proved by the exact returns from the several districts which have been already made out. The results are most striking and instructive, and appear to me to deserve the serious attention of the Legislature. I have drawn out an abstract of them for the information of the Committee, to which I would particularly solicit attention.

13. Can you furnish a return of the population in the districts to which reference has been made, where fever particularly prevails?—The population included in the twenty metropolitan unions consists of 851,229 souls, and out of this population the number of persons who received parochial relief during the year ended the 20th of March 1838 was 77,186; but, as I have just stated, there are certain districts which may be considered as more especially the seats of fever, and those are by far the most populous districts, and in general, those also in which the population is the most dense.

14. After stating those particular places, you proceed to state that "the two districts of Bethnal-green and Whitechapel, to the state of which this Report more especially relates, were selected for inspection principally because the records of the London Fever Hospital, from its first foundation, show not only that fever is always particularly prevalent in these districts, but that the very worst forms of fever always abound in them." That was the reason of the selection?—Yes.

15. Then you go on to state, that a particular account of the locality, which was in each case written on the spot, is annexed?—Yes, that was the case.

16. Before going to the facts, you say, "It appears that in many parts of both these districts fever of a malignant and fatal character is always more or less prevalent. In some streets it has recently prevailed in almost every house; in some courts, in every house; and in some few instances, in every room in every house. Cases are recorded in which every member of a family has been attacked in succession, of whom in every such case several have died; some whole families have been swept away"?—That was evidence obtained on the spot from the medical men who attended the people.

17. You state that "the magnitude of the result in London, if that magnitude be estimated by the numbers attacked, is not slight. From returns received from the Bethnal-green and Whitechapel Unions, it appears that during the last year," which was 1838, "there occurred of fever cases, in the Bethnal-green Union, 2,084; in the Whitechapel Union, 2,557: total, 4,641"?—It must be borne in mind that those are the cases of fever attended by the medical officers of the unions, embracing only that class of persons who received parochial relief; that does not at all include that portion of the population in the middle scale, it merely takes in the paupers. There are many just above the pauper population,

the

the shopkeepers and the labourers, who never received parochial relief, who are not included; nor does it take in the dispensary patients.

18. The numbers would have been much greater, if the class above the paupers and the dispensary patients had been included?—Yes; if they were added, the number would be much greater.

19. Mr. *Walker.*] Can you form any idea of the relative proportion?—I know from personal observation, that fever has been very prevalent among the labourers who were above applying for parochial relief, and amongst the people who keep little shops, and industrious people; but I cannot venture to state what was the proportion; those stated in this Report are ascertained facts.

20. Is it your opinion that the number of cases would be doubled?—My impression is, that it would be doubled; but I should be very reluctant to hazard an opinion when I have not exact matter of fact to go upon.

21. *Chairman.*] A number, however, very considerably beyond those you have stated of persons in the pauper population are affected by the defective state of the sewerage, and also by taking fever from those pauper persons who are so widely affected by it?—At all events, living in the exact localities, they also are affected. There are certain persons who may be able to give a better estimate of the relative proportions of those just above the pauper population than I am; for they probably have been their patients, and they may be able, therefore, better to form an estimate than I can.

22. You go on to say "It appears that the streets, courts, alleys, and houses in which fever first breaks out, and in which it becomes most prevalent and fatal, are invariably those in the immediate neighbourhood of uncovered sewers, stagnant ditches and ponds, gutters always full of putrefying matter, nightmen's yards, and privies, the soil of which lies openly exposed, and is seldom or never removed. It is not possible for any language to convey an adequate conception of the poisonous condition in which large portions of both these districts always remain, winter and summer, in dry and in rainy seasons, from the masses of putrefying matter which are allowed to accumulate;" you are still of that opinion?—Yes; I think it is not possible to frame language to express the intensity of the evil; I remember one place in particular, an open ditch, I suppose of from 300 to 400 feet long and 10 feet broad, into which all the privies of an adjoining street empty, and offensive matter always poured into that open ditch never removed; it does not appear to have been ever touched.

23. That is in a populous district?—Yes, in a most populous district, with houses all around it. When I examined it the stench was most intolerable; my impression was, that no one who had not seen it would believe that such a thing could be allowed.

24. You say further on, that no strength of constitution would be able to resist constant exposure to the exhalations which are always arising from these collections of filth?—Certainly not.

25. After stating that a large portion of Bethnal-green is a swamp, hardly any part of which is drained, you say, "The dampness of the houses is an evil almost universally complained of by the inhabitants, as well as the wet and muddy condition of the streets during a considerable part of the year. In the less open parts of Bethnal-green, and in a considerable part of Whitechapel, the closeness of the streets, lanes, alleys, and courts is most oppressive. A fresh current of air can hardly ever reach them, and the evil is greatly aggravated by the very general custom of the people permanently to close the windows of their houses, partly for the sake of warmth, and partly to prevent the real or imaginary effects of the air on the silk used in their work." They are chiefly silk weavers in that district?—Yes, in Bethnal-green; they do all they can to stop out every breath of air.

26. At the top of page 35, you state a case in which there was fever, that a drain was made, and that things were better subsequently. Then you say, "Dwellings, thickly crowded with inhabitants, stand all around the slaughter-houses; yet here, where the materials for the production of the worst forms of fever are most abundant, scarcely a case has occurred even during the present epidemic." You state the cause of that comparative freedom from it to have been drains having been made?—Yes; there are two facts recorded which I wish most strongly to urge upon the attention of all persons who take an interest in the subject, for they are most remarkable ones. That place(the butchers) I had occasion to attend to before the drain was made; it is a most excellent drain, made by the city of London. I have attended the people who live there, both before and

T. S. Smith, M.D.

25 March 1840.

and after; I was struck with the remarkable difference; I did not for some time observe that any drain had been made, it had escaped my attention. I was struck with not seeing so many cases of fever as I had been accustomed to see, and when it did occasionally break out there, the cases were of a much milder character; all the circumstances remained precisely the same, except that this drain has been made, and now the butchers, after great persuasion, have been induced to open an underground communication with it; and the whole of that side of the street is now very perfectly drained, but the opposite side is not.

27. You go on to say on the other side, "In the passages, courts, and alleys on the very opposite side of the street, from the houses of which there are no drains into the common sewer, fever of a fatal character has been exceedingly prevalent"?—Yes; there is a remarkable difference.

28. You think that it prevails on the one side because there has been no cleansing, and that it has been removed on the other by drains being effected?—Yes; and there is a similar fact in a different state of the population in the Hackney-road, where the population is much less dense; here they live in a crowded condition, but still the fact is exactly the same.

29. Then you go on to say, "The preceding facts point to one effectual remedy for lessening the sickness and mortality of these and similar districts, namely, the removal of the sources of the febrile poison." Your opinion, therefore, is decidedly that by proper drainage, cleansing, and ventilation, a great deal of these sources of evil to the humbler classes might be removed?—Yes; a very large proportion of them.

30. With respect to the cost to parishes arising from fever cases, proceeding from the causes you have referred to, you say, "By the returns from Bethnal-green and Whitechapel Unions, it appears that the extra expense for fever cases, for the quarter ending Lady-day 1838, is to the Bethnal-green Union, 216*l.* 19*s.*; to the Whitechapel Union, 400*l.*: total, 616*l.* 19*s.*" Thus, at the rate of the last quarter, the expense of the fever cases in the two parishes alone comes to 2,467*l.* 16*s.*?—Just so.

31. Are you of opinion, that if this money were to be expended in removing the causes which lead to it, there would be a great saving to the parish and a great benefit to the poor?—Yes, for this obvious reason, that this is of yearly occurrence; whereas, the sewerage being once made, the evil is cured in a great degree.

32. You are of opinion that the incurring this expense, on the part of the parishes, would be a measure of economy, as well as a measure of humanity?—That is my opinion.

33. You say, "It becomes then a question, whether, setting aside all other considerations, it is not expedient, even on the ground of economy, to appropriate a part of the money expended on the poor, in protecting them from fever, by removing from the immediate proximity of their dwellings the main cause that produces it, rather than by relieving a few individuals after they become affected with the disease"?—That expresses what would be the most rational course.

34. You mention, also, that it might perhaps be beneficial, at a moderate expense, to take means "to introduce free currents of air where at present the air is perfectly stagnant and stifling;" and you advert to the advantage which would arise from an opening cut through the district, so as to form a free current of air?—Yes, there are districts where immense good would be done, considering the value of the houses, at a moderate expense; the benefit would be very great.

35. In page 36, paragraph 7, you say, "It is desirable that a power should be lodged somewhere, to prevent landlords from building in swampy places, without proper drainage; to compel them to drain into common sewers when made, and likewise to compel them to keep the privies in a state of cleanliness, and to cleanse the exterior and interior of the houses, either at given periods, or when obviously indispensable to the health of the tenants"?—Yes, I think that is one of the most important powers which could be conferred: even the magistrates have it not at present.

36. Then you report with respect to a remarkable case in which, from the neglect of cleansing and whitewashing, and so on, fevers prevailed, and successive lodgers died of fever in one set of rooms, they having had no notice of such fever having existed?—Yes, the magistrates had extreme difficulty to put it down; they did it by what they considered a stretch of power at last; the place was Shepherd's-court, in the Whitechapel Union, consisting of six houses.

It

It was notorious that fever had prevailed to a great extent in this court, and that different families had, in succession, occupied a set of rooms and become affected with fever.

37. You state that "One set of people had gone in, become ill with fever, and were removed; that another set of people had gone in, and been in like manner attacked with fever; that this had occurred several times, and that it was positively known that this house had been affected with fever for upwards of six weeks before the present application was made; that on hearing this the magistrates sent for the owner of the house and remonstrated with him, for allowing different sets of people to occupy the rooms without previously cleansing and whitewashing them;" and that they had great difficulty in getting it cleansed by authorizing the medical officers to do so?—Yes; these facts are correctly stated.

38. Mr. *Ingham.*] Since it was cleansed there has been no case of fever?—No; this was the more interesting, inasmuch as it will come out, that similar facts have occurred to other medical men.

39. *Chairman.*] Will you turn to page 38, "Account of a personal inspection of Bethnal-green and Whitechapel, in May 1838." You state you have "called on the medical officers of the union (Mr. Taylor and Mr. Goodwin), who have the care of the out-door poor; I requested that they would accompany me over the district and point out to me first, those places in which fever is constantly prevalent; and, secondly, those in which it is either altogether absent, or in which, when an individual case breaks out, it seldom or never spreads. I traversed a circle of from six to seven miles in extent; I wrote the account of the places I am about to notice, on the spot; I entered many of the houses, and examined their condition as to cleanliness, ventilation, &c. as well as the state of the people themselves, who were at the time labouring under fever"?—Yes, I did.

40. You say, "The district of Bethnal-green contains upwards of 70,000 inhabitants; in the greater part of it, the streets are not close, nor are the houses crowded; on the contrary, large open spaces of ground intervene between them, but in one part the population is as densely crowded as in the closest and most thickly-peopled parts of the city"?—Yes; there is no reason why the whole of that district should not be quite healthy, except from the neglect of the precautions which should be taken.

41. In the general account you give, which is extremely interesting to any one who takes an interest in this subject, but which it would occupy too much time to go through, you state your going down to what is called Punderson's Gardens; you say, "This is a long, narrow street; the houses have no sunk area, and the groundfloor is extremely damp; along the centre of the street is an open sunk gutter, in which filth of every kind is allowed to accumulate and putrefy; a mudbank on each side commonly keeps the contents of this gutter in their situation, but sometimes, and especially in wet weather, the gutter overflows; its contents are poured into the neighbouring houses, and the street is rendered nearly impassable; the privies are close upon the footpath of this street, being separated from it only by a paling of wood; the street is wholly without drainage of any kind; fever constantly breaks out in it, and extends from house to house; it has lately been very prevalent here, and we have lately had several fatal cases from it in the London Fever Hospital;" that is a correct and accurate account of what you saw yourself?—Yes; it was written down on the spot.

42. In speaking of the condition of Campden Gardens, you say, "Campden Gardens consist of a number of small groundfloor houses; each house contains only two rooms, that which is the largest is about seven feet by nine, and the smallest barely large enough to admit a small bed; the height is about seven feet; in winter the houses are exceedingly damp; the windows are very small; there is no drainage of any kind; it is close upon a marshy district immediately to be described; in this street fever is very apt to break out, and to become more than commonly fatal; often all the members of a family are attacked by it, and die one after another; during the present season, several entire families have been swept off by it"?—Yes; several of the houses in which such an event had taken place on that spot were pointed out to me by the medical man who had attended the families.

43. You say, "Yet the houses stand in an open space, and have little gardens attached

T. S. Smith, M.D.
25 March 1840.

attached to them; so that, if they were properly built and well drained, they might be perfectly healthy"?—Yes; the people take a delight in cultivating their little gardens: it is a recreation to them, and might and ought to be a healthful one.

44. You then proceed to Lamb's-fields, which you state is "An open area of about 700 feet in length and 300 feet in breadth; of this space, about 300 feet are constantly covered by stagnant water, winter and summer; in the part thus submerged there is always a quantity of putrefying animal and vegetable matter, the odour of which, at the present moment, is most offensive: an open filthy ditch encircles this place, which, at the western extremity, is from eight to ten feet wide." Then you say, "Nothing can be considered more disgusting than the appearance of this ditch for an extent of from 300 to 400 feet, and the odour of the effluvia from it is at this moment most offensive"?—That is quite a correct representation.

45. You add, "Lamb's-fields is the fruitful source of fever to the houses which immediately surround it, and to the small streets which branch off from it; particular houses were pointed out to me, from which entire families have been swept away, and from several of the streets fever is never absent"?—Yes; it seems to me to be perfectly in the condition of the wigwams of the vilest savages; they cannot be worse; we constantly hear of whole tribes of those savage people being swept away by fever, small-pox, and dysentery; and there is precisely the same thing constantly going on at Bethnal-green, whole families are swept away from precisely the same cause.

46. Are the districts of which you have given so melancholy a description, inhabited chiefly by the working and labouring classes?—In the largest proportion; there are, here and there, a few better houses interspersed, but they are in general inhabited by the poorer classes.

47. With reference to Hare-street Fields, you say, it is "An open space, close to the former, containing about 300 square feet, a large portion of which, in rainy weather, is completely inundated; it is surrounded on all sides but one with small houses, and several streets branch off from it; in all the houses forming the square, and in the neighbouring streets, fever is constantly breaking out, and the character of the fever in this neighbourhood has lately been very malignant"?—That is a perfectly accurate account.

48. Passing over a portion of the detail, you then come to Alfred and Beckwith-rows, "They consist of a number of buildings, each of which is divided into two houses, one back and the other front, each house is divided into two tenements, and each tenement is occupied by a different family; these habitations are surrounded by a broad open drain, in a filthy condition; heaps of filth are accumulated in the spaces meant for gardens, in front of the houses; the houses have common privies, open, and in the most offensive condition;" then you state the evils arising from fever, which you found there; are you of opinion that the fever which you found prevailing so extensively in that district, arose from neglect of cleanliness, drainage, and ventilation?—Yes; I think those were the causes of its great prevalence, and of its great severity.

49. On turning over the page there is a description of North-street; you state, "That the houses are in a most miserable condition, surrounded by vast collections of filth; most of the houses are occupied by pig-dealers, and the filth produced by the pigs is seldom or never cleared away; the stench here is dreadful"?—That is perfectly correct.

50. You refer to St. John-street; you state that that is "A close and densely-populated street, in which malignant fever has been remarkably prevalent, and has stalked from house to house; in one room which I examined, eight feet by ten, and nine feet high, six people live by day and sleep at night, the closeness and smell almost intolerable; adjoining this house is a cow-yard in a filthy state;" is that place also in want of cleansing and ventilation?—Yes; in a most extremely close and filthy condition, the air is quite stifling.

51. You state the same with regard to some other places, called Fleet-street and Shackwell-street, varying a little in account, but nearly the same in the general deductions to be drawn from the state of those places?—Very much the same.

52. With reference to Hackney-road Division: "Gibraltar-walk consists chiefly of houses of one story; along the centre of the street is an open gutter, in which all sorts of animal and vegetable matters accumulate and putrefy, and the

the odour of which is most offensive. In the upper part of this street, especially, fever has been extremely prevalent." Do you consider that that fever has arisen from the neglect there described?—I think very much indeed.

53. Again: "In a direct line from Virginia-row to Shoreditch, a mile in extent, all the lanes, courts, and alleys in the neighbourhood pour their contents into the centre of the main street, where they stagnate and putrefy"?—That is a most remarkable place, remarkable for its closeness and filth; one is shocked to see human beings clustered in the masses that they are there, in a position in which it is impossible to maintain the health, or to prevent the constant recurrence of infectious and malignant diseases.

54. Going on to Read-street and Vincent-street, you say, "The condition of these streets is exactly similar to that of the preceding; families live in the cellars and kitchens of the undrained houses, dark and extremely damp; in some or other of these houses fever is always prevalent; 'My assistance here,' said the medical officer who was attending me, 'is always required; I am never without cases of fever here'"?—That is the truth.

55. Then you go on, "Even in Church-street, Bethnal-green, the main thoroughfare, there is no drain, the water runs off as it can, and now and then the parish authorities send round a mudcart to gather up what becomes so thick as to block up the way"?—Yes, that is an accurate description of the state of that main street.

56. There is no exaggeration in any of those particulars?—Not the slightest.

57. You say, "At the end of Wellington-row, and at right angles with it, a ditch from eight to ten feet broad extends nearly to the Hackney-road; in the greater part of its course, gardens neatly cultivated extend from adjacent houses to its edge; the stench arising from this ditch, at this moment, is intolerable; the poor people inhabiting the neighbouring houses, while cultivating their little gardens with so much care as a recreation, and in the hope of promoting their health, little think that at every moment they are inhaling a deadly poison"?—That is so; the gardens go down close to this ditch, which is always sending up poisonous effluvia, giving them fevers: it is a most melancholy sight.

58. As a contrast to this, you state, going down "From Goldsmith's-place to Cambridge-heath, there is an excellent underground common sewer, completely covered in; here the inhabitants are healthy, no case of fever is known to have occurred in the neighbourhood; this sewer was made two or three years ago, before which fever was as prevalent here as in most other parts of the district, but since that time there has been a remarkable improvement in the health of the inhabitants"?—Yes, that is very striking.

59. Do you believe that to be owing to the drainage?—Yes; during the great prevalence of fever all round last year, I did not hear of a case of fever there, though in the surrounding district it was in almost every house.

60. You go on to say, "Immediately behind Bethnal-green, is a large stagnant ditch, surrounded by poor cottages, the inhabitants of which are constantly suffering from fever; into this ditch, among other things, is constantly flowing the filth from a number of pigsties, where it is allowed to accumulate and putrefy"?—Yes, they are in the most filthy condition.

61. Then, proceeding to Whitechapel Union, you state that, "The greater part of Whitechapel is very badly drained; in many places the population is densely crowded; the streets, courts, and alleys, as at present constructed, admit of no current of air; large collections of putrefying matter are allowed constantly to remain in the neighbourhood of the houses, and the houses themselves are extremely filthy:" is that a correct general account of that district?—Yes, that applies to the greater part of the whole parish.

62. Do you happen to know what is the population of the whole parish of Whitechapel?—Sixty-four thousand one hundred and forty-one.

63. Do you believe that this description of this melancholy neglected situation applies to the greater part of that population?—Yes, to the greater part of the whole population.

64. Do the greater part of the population belong to the humbler classes?—Almost entirely.

65. In selecting some examples of this general neglect, you say, with reference to Baker's Arms Alley, "A narrow court, with a dead wall about two yards from the houses: the wall as high as the houses; the principal court is intersected by other courts extremely narrow, into which it is scarcely possible for air to penetrate: close to the dead wall, between the wall and the houses, is a gutter, in

T. S. Smith, M.D.

25 March 1840.

in which is always present a quantity of stagnant fluid, full of all sorts of putrefying matter, the effluvia from which at the present moment are most offensive, and the sense of closeness extreme; all the houses are dark, gloomy, and extremely filthy; at the top of the innermost courts are the privies, which are open and uncovered, the soil of which is seldom removed, and the stench of which, at the present moment, is abominable;" and again, "the fever here has been extremely mortal, and has raged in almost every house:" is that an accurate account?—It is; and those high walls are a very grievous evil in many places, both in this district and in Bethnal-green. The houses are placed, perhaps, five or six feet only from the wall, and the houses, being generally only one story high, they reach up to the middle of that story, so that it is impossible for either light or air to get into the sitting-room or bed-room.

66. It prevents air or light penetrating into the houses?—Yes.

67. In speaking of Johnson's-change, you say, "Some time ago a cesspool overflowed in one of these courts, and its contents were allowed to remain upon the surface for several weeks; after a time a fever of a malignant character broke out in the house next the cesspool, and has since extended to almost every house in all the courts: there is here no drainage of any kind, there is consequently a great accumulation of filth, and the sense of closeness is stifling"?—Yes, and the population there is exceedingly dense.

68. Further on you say, speaking of Cartwright-street, "A long street, with an open gutter in the centre: in this street fever has been prevalent in every house. In Walton-court, a narrow and close court, terminated at the extremity by a dead wall as high as the houses, fever has prevailed in every house"?—Yes, I examined the houses particularly, and found that to be the fact.

69. Again, in Blue Anchor-yard, you give a description of the accumulation of filth, the neglect of drainage, and the prevalence of fever in that district, nearly similar to that in the districts you have described before?—Yes.

70. The same account extends to the streets on the northern side of Whitechapel, "As Essex-street, Castle-street, Castle-alley, Goulston-street, Petticoat-lane, Tewkesbury-court, George-yard, New-court, the whole of Wentworth-street, and all the courts, alleys, and passages in the neighbourhood, are without any drainage, and extremely filthy and close"?—Yes.

71. You say, "Fever has raged dreadfully in the whole of this district; in some cases, six persons of a family have been ill of it together, all in one room, and four in one bed"?—Yes, I saw that myself in several cases.

72. In page 46, in the second paragraph, after adverting to what was said as to the causes of fever in other districts, you say "Its operation is not less real or less constant, though it may be less striking around the stagnant ditches, the uncovered sewers, the filthy gutters, and the exposed privies of Bethnal-green, and in the close, dirty, and undrained courts and alleys of Whitechapel. For the future, by proper sanitary regulations; namely, by attention to the structure of houses, the arrangement of streets, the introduction of the requisite space between streets and houses, the construction of underground sewers, the opening of underground drains from the houses into the sewers, and the immediate removal from the neighbourhood of dwelling-houses of all refuse matter capable of undergoing putrefaction, the generation and accumulation of this poison might be prevented to a great degree in all cities, towns, and villages;" is that your confirmed opinion?—Yes; I think so most firmly.

73. Has any material improvement taken place since the period when you made this examination?—Yes; they are now in the act of making a drain in the worst part of the Whitechapel district.

74. Some commencement of improvement has taken place?—Yes; it appears that these inquiries have attracted great attention, and that there is reason to hope that the authorities are really making efforts to lessen some of the most grievous of the evils.

75. In what district of the sewers is this place?—The Tower Hamlets.

76. Who is the secretary to that commission?—Mr. Unwin, I believe.

77. To what cause do you refer the defective state of the sewerage described?—I have generally heard it ascribed to the poverty of the districts.

78. To what class of landlords do the houses generally belong?—I have understood them to belong to builders, who, without the slightest regard to the condition of the land, in fact build the houses on a perfect swamp; they build them in the slightest and cheapest manner possible, in order to let them at the highest

rent

rent they can; they belong to persons who spend their little capital in that way, their only object being to get the greatest amount of money at the least outlay.

79. Do you happen to know what are the present regulations respecting building?—I know that they are altogether inadequate to meet the evil.

80. Are there any regulations as to the depth to which they shall sink cesspools, so as to prevent their being sunk below the level of the common sewer?—I believe not any.

81. Is there any power to compel the inhabitants to carry their drains into the common sewer?—Certainly not.

82. Is there any power, supposing they do carry their drains into the common sewer, to compel them to make their drains of a smaller size than the common sewer, to prevent its being choked?—No; and after the City of London made that great sewer in Aldgate, High-street, the city had the greatest difficulty in getting the butchers to drain into it; they have at length got it done. I speak of that as evidence that there is no authority.

83. Are there any persons appointed for the carrying into effect the communication between those houses and the common sewer?—I believe not.

84. Are there any persons who are authorized to make inspection, and to report upon those matters?—No, those are omissions in our social arrangements, which appear to me to be of grave importance, and few things could tend more to the health of the lower classes than the lodgment of such authority in competent hands.

85. Is it your opinion, from the great neglect which prevails in this very populous and extensive district, and which you think prevails in other districts, that it is absolutely necessary there should be adequate power given by law for the purpose of enforcing attention to these measures?—It appears to me a thing clearly requiring legislative interference; it is a matter in which the poor people cannot, by any forethought of their own, guard against the evil; these poor people must take cheap tenements, and these houses may be placed on marshy ground, with no drainage of any kind, no means of carrying away filth, and they cannot help themselves, though they are placed in the midst of the focus of fever perhaps, or of certain other diseases, which incapacitate them from pursuing their labours, and thus they are thrown upon the parish, and grievous evils produced. I cannot help again begging the attention of Members of the Legislature to the Abstract which I have furnished of the Returns from the Metropolitan Unions; they afford indubitable facts which appear to me to deserve the deep attention of the Legislature.

86. Have you turned your mind to any suggestions as to the power which should be given for the security of the health of the inhabitants of those districts?—I have not considered the details, but I am fully satisfied as to the principle. I have a very strong conviction of the paramount importance of its being rendered impossible that any one should be allowed to build a house for the residence of human beings, without taking care to make it dry, and to make it pure, by affording the means of carrying away easily and completely, the refuse matter which there must be wherever human beings reside; at present, no regard whatever is paid to that; no more regard is paid in the construction of houses to the health of the inhabitants than is paid to the health of pigs in making sties for them; but that would be a false statement, for, in point of fact, there is not so much attention paid to it.

87. The pigs belong to the persons who have the sties, and have an interest in their lives?—Yes.

88. If the persons who come into those houses are not connected with the owner of the house, they care little for their health?—Just so; and unless protection be afforded to this class of persons, they are exposed to all those evils, and have no power whatever to relieve themselves from them.

89. You say, near the end of your Report, speaking of the evils the poor are liable to, and after stating the pestilential places in which the industrious poor are obliged to take up their abode, "They have no choice; they must live in what houses they can get nearest the places where they find employment; by no prudence or forethought on their part can they avoid the dreadful evils of this class to which they are thus exposed; no returns can show the amount of suffering which they have had to endure from causes of this kind, during the last year, but the present returns indicate some of the final results of that suffering; they show that out of 77,000 persons, 14,000 have been attacked with fever, one-fifth part of the whole, and that out of the 14,000 attacked, nearly

T. S. Smith, M.D.

25 March 1840.

1,300 have died;" is that an accurate account?—That is an accurate account, made specially for this inquiry, by order of the Poor Law Commissioners.

90. You go on to say, "The public meantime have suffered to a far greater extent than they are aware of from this appalling amount of wretchedness, sickness, and mortality. Independently of the large amount of money which they have had to pay in the support of the sick, and of the families of the sick, pauperized in consequence of the heads of those families having become unable to pursue their occupations, they have suffered still more seriously from the spread of fever to their own habitations and families." Has that fallen under your observation?—Yes; that I see constantly.

91. Then you say, "It is notorious that this disease has been very prevalent during the last year among the industrious classes who have never received parochial relief, and that it has found its way even into the dwellings of the rich, where it has proved extremely mortal. Generated in Bethnal-green, in Whitechapel, in St. George-the-Martyr, in Lambeth, in Holborn, &c., it has spread to the better streets in the immediate neighbourhood of these and similar places, and thence to still wider and more airy streets at a great distance, and ultimately to the most remote streets and the great squares." That is your opinion?—Yes; I have constant experience of that being the course of events, but I think it would be very desirable that some approximation should be made as to the extent in which that is the fact, especially the extent to which fever has prevailed among the persons who compose the lower sections of the middle class; and I would beg to suggest, that an inquiry may be made of those gentlemen who may be better able than I am to give the proportion in which that has taken place. I think it would be very desirable to ascertain that.

92. You say that an improvement in a degree might be made, "By an amendment of the Building Act; by carrying into the districts of the poor improvements similar to those already completed or now in progress in the places inhabited by the wealthier classes; by removing as far as practicable the obstacles to a free circulation of air in the closest and most densely populated neighbourhoods; by the construction of underground sewers with effectual surface drainage into them; and by the immediate removal of refuse animal and vegetable matters by an efficient body of scavengers"?—Yes; those remedies would remove the most urgent of the evils.

93. You state that "The most pestilential of these places, when once put into a wholesome condition, would be maintained in that state at a comparatively small expense; whereas, as long as they are allowed to remain in their present condition, the results must continue the same: it follows, that the prevention of the evil, rather than the mitigation of the consequences of it, is not only the most beneficent, but the most economical course." That is your opinion?—Certainly it is; most decidedly.

94. Mr. *Cowper*.] From what you state, it appears that in some instances there is an indisposition to avail themselves of the means of relief that were offered to them?—That was in the case of the butchers; they were wealthy people, and said they did not suffer from it, and that they did not care for it; but the people living immediately around them and over their slaughter-houses were constantly affected by the worst forms of fever.

95. Is it clear that persons would be disposed to avail themselves of the means afforded?—No; but the same authority which obliges sewers to be made, should also oblige drains to be made into those sewers, or nothing is done effectually.

96. Mr. *Ingham*.] There is now under the London Building Act a power to see that a party-wall shall be made of sufficient solidity?—Yes, just so.

97. And you would require that there should be equal power to see, before a house is inhabited, that there is a communication with the underground drainage?—Yes; nothing can be done to secure the health of the population without that.

98. The expense of raising a fund to lay down sewers within the district of any commission is levied by a rate on the parties within the limit of that commission?—Yes, I believe so.

99. In Bethnal-green and Lambeth the inhabitants are of a very poor order, and the charge would be very heavy?—Yes; it would be more, in fact, than the parish could sustain; I do not apprehend it would be possible to effect it, if it was to be done by themselves.

100. Disorder, when engendered in a district, is not confined to that district, but extends itself to other districts?—Yes; and on that ground it appears to me

that

that those outer districts of London, those suburban places, should be drained at the common expense, for it is for the common good.

101. Where there is not a commission of sewerage, but private drainage, there would probably be great difficulty in passing into the lands of other persons to get a sufficiently low level?—Yes.

102. Probably it would be necessary to extend the commissions of sewerage, by having a power by law to enable a person, on due compensation, to pass through the grounds of his neighbour on a lower level, to carry off the drainage from the higher level?—Yes; or a portion of the community might have their health constantly endangered, and their property injured.

103. Probably it would be better to have a common provision than to extend the power of the Commissioners of Sewers?—I think it would.

104. Mr. *Walker.*] You apprehend that the requisite power would be to make an open sewerage, and then to compel the owner of the house to make an under drain to that common sewer?—Yes.

105. Do you consider that it would be wise, by legislation, to effect that object?—I think it would be extremely wise, and I cannot conceive anything more urgently needed.

106. Are the streets, lanes, and alleys you have described in your evidence, generally paved, or not paved?—In general unpaved.

107. Do you apprehend that the ground, in consequence of the want of pavement, retains additional moisture?—Yes, I think that is an additional evil; and there is a gutter generally in the centre of the lane or alley which is never dry, and the parings of potatoes and the refuse of vegetable and animal matter of all sorts, dirty water from the washing of clothes, and from the washing of the houses, all flow into this gutter, and there collect and remain and stagnate and putrefy; that goes on through all seasons, winter and summer; nothing is done to remove it.

108. Are there no police regulations with regard to scavenging these close places?—I am not aware that there are; it is never done; they are out of sight; none but the medical men and parish officers know anything about them; they are as much unknown as the condition of a district in Otaheite.

109. Mr. *Cowper.*] You particularize fever as one of the evils produced by the want of drainage; are there any other disorders produced?—Yes; I took fever as the most striking and the most important, but it is a very imperfect view of the evil to confine it to fever; there is a large class of diseases to which the poor are constantly subject, which, in my opinion, are just as distinctly attributable to malaria arising from this putrefying matter as fever itself.

110. Will you name any other disorders?—All that class of disorders which come under the name of disorders of the digestive organs, the labouring classes who are not affected with fever, are labouring under; disordered stomachs and bowels, and derangement of the liver. It is not more certain that this poison, in a greater degree of intensity, will produce fever, than that the same poison, in a less degree of intensity, will produce disordered states of the stomach, and various most distressing nervous diseases.

111. *Chairman.*] Is the small-pox prevailing in those districts?—Very often, and when it does prevail, it is very severe.

112. Does the crowded, neglected, and dirty state of the district increase the virulence of that disorder?—Very often, and so also measles; it is as certain as the law of gravitation, that when they ever come into those places they immediately become severe, and often malignant.

113. Mr. *Cowper.*] Have you known of any cholera?—Those were the great seats of cholera, the places in which cholera found its home, and its severest ravages were there.

114. *Chairman.*] You stated that you thought there would be a very considerable expense in making those sewers, too great to be effected by the parish alone; would not a considerable saving of expense arise to parishes from the diminution of the amount of relief to the poor if those sewers were made?—Yes; there would be a considerable saving of expense in half a century; it would be the cheapest plan; but the district is so large, and there is so much to be done, that I apprehend it would be vain to look to the district alone for the means.

115. Do you happen to know what is the amount of the poor-rates?—No, I do not bear that in mind.

116. You are not acquainted with the locality of any other district, but there are other districts which you consider neglected?—Yes; I infer that from the

T. S. Smith, M.D.
25 March 1840.

quantity of fever which prevails in them. I see that in other districts the amount of fever is very nearly the same. I have made a personal inspection of only two districts; but I know, from the records of the Fever Hospital, and from the Returns of the Metropolitan Unions, that typhus and other forms of fever are just as prevalent in other districts.

117. Are those last places inhabited chiefly by the working and poorer classes?—Yes, just the same class of population as I have alluded to; the class of population is the same, the character of the disease is the same, and therefore I infer the localities to be the same; those are Lambeth, Stepney, St. George-the-Martyr, Poplar, Holborn, Rotherhithe, Bermondsey, St. George's-in-the-East, and Wapping.

118. Mr. *Ponsonby.*] A good many of those are in the neighbourhood of the river?—Yes, Lambeth is one which particularly requires investigation; it would be very important, with reference to this inquiry, to make a personal examination, where we know the disease to be the same, and the population to be pretty much the same, whether the circumstances of the localities are not very much the same; it was thought at one time very desirable, by the Poor-law Commissioners, that the inquiry should be extended to some others of the more important suburban districts.

119. Mr. *Ingham.*] You say that moisture is one great cause of the occurrence of fever?—Yes, dampness, more especially in the shape of fog, acts as a powerful means of transmitting the malaria, at the same time that, as a powerful agent in the production of cold, it predisposes the human body to the influence of malaria.

120. Does that apply to particular seasons as well as the defective drainage?—Yes, it is at all times a powerful concurrent cause.

121. You mentioned that in many houses, particularly those of the hand-loom weavers, there is a wish to exclude the external air, and the rooms are in consequence in want of ventilation?—Yes.

122. Would it not be desirable to prevent the dampness, and occasion ventilation, that they should have open fires?—Yes, that would tend to improve the ventilation of the rooms.

123. Whatever would facilitate the acquisition of coal, would, therefore, be a material preventive?—Yes; but the dampness in some of the houses is seen upon the walls, they cannot keep anything without its rusting, even in the cupboards near the fire.

124. Have you had occasion to make observations on the state of the health of those who have fuel at hand, and those living in a situation where fuel is not so easily procured?—No, I have not been able to carry out the comparison with any degree of certainty; but from analogy one should infer, that the warmth and increased ventilation, and the current of air which is produced by an open fire, will diminish, in some degree, and perhaps sensibly diminish, the amount of sickness.

125. Mr. *Ponsonby.*] In those parts which you mention as particularly unhealthy, are the houses generally old?—No; most of them are generally new.

126. There is no more attention paid to the building of houses for that class of late years than formerly?—Not the slightest.

127. *Chairman.*] What is the supply of water?—In Whitechapel the supply of water is very good; I do not know how it is supplied to Bethnal-green.

128. Is there any open ground for exercising ground, or public walks, reserved?—No; but Bethnal-green is remarkable for the intervention of a number of open spaces.

129. Are they covered over with water, or are they marshy, or is there any place which is open and dry, where the people can walk out with their families?—No; it most unfortunately happens that an open space is to Bethnal-green a great evil, for they are so neglected that there are stagnant pools always in the centre of them, and large quantities of stagnant water, full of animal and vegetable matter, always putrefying, and making so many sources of disease.

130. Instead of being a benefit, as they should be, they create an evil?—Yes.

Jordan Lynch, M.D., called in; and Examined.

Jordan Lynch, M.D.

131. *Chairman.*] YOU are the medical officer of the West London Union?—I am.

132. Are you acquainted with the district which Dr. Southwood Smith has been describing?—Yes, by occasionally visiting it.

133. Does

133. Does your opinion coincide with his generally?—Generally it does.

134. As to the causes of fever, and as to the state of the district, as far as you know it?—Yes, as far as I know it.

135. To what district does your knowledge particularly extend?—To the West London Union; it comprises St. Sepulchre's parish, the end of Holborn, Field-lane, West-street, the rookeries and little courts running out of Fleet-lane, and down to Fleet-ditch: also the two Bartholomew parishes, the Old Bailey and its precincts, that I am immediately connected with.

136. Do you know what the population of those districts is?—The population of that one Union is between 28,000 and 30,000.

137. Are the localities you have spoken of chiefly inhabited by the humbler classes, the working classes?—It is a mixed population; there are some very good streets, and there is a sudden transition into wretched courts.

138. Will you give an account of the districts inhabited by the poorer classes, as to the state of ventilation, and sewerage, and drainage, and cleanliness?—On the south side of my immediate district there is one court, called Back Bear-alley, in which, within the last 12 months, I may say within the last six months, upwards of 40 cases of typhus fever have occurred; there are not more than nine houses in that court, two people cannot walk abreast in it; they have one common privy, and sometimes there are packed in one room six or seven of the poorest and most destitute of our fellow-creatures: this is under the surveillance of the Inquest. The drainage was deficient in that Back Bear-alley; I directed the attention of the Inquest to it, and they sent notice to the parties concerned that they were coming; the consequence was, they had their houses put in order; they were washed and cleansed, and in some instances, where the fever cases had occurred, they took the precaution of whitewashing: six cases having occurred, some of which were sent to the Fever Hospital, and others treated at home; notwithstanding those precautions, 34 cases afterwards occurred and five or six deaths.

139. Is that from want of cleansing and draining?—Those are co-operating causes.

140. Is the drainage bad there?—The drainage was quite defective. I directed the attention of the authorities, and sent a report to the commissioners: Mr. Kelsey is the paid surveyor; I received this reply, in which they state that 22 miles of sewers had been explored and cleansed in the City of London, the ventilation improved: then they go on to state that they will attend further to this, and they have since laid out in that place, I believe, 800*l.* or 900*l.*; and since they have laid out that money, I have not been called in to a single case of typhus fever.

141. You think that what they have effected there has done good?—Certainly.

142. Mr. *Patten.*] What is the extent on which the 900*l.* has been laid out?—The Back Bear-alley, and Seacoal-lane; perhaps about 300 yards extent.

143. *Chairman.*] Have they laid out the 900*l.* in those two places?—Yes; they have done a great deal of good, but the proprietors of the houses gave as much opposition as they possibly could; the commissioners of the City of London required they should pay one-third towards the outlay, but they refused to contribute.

144. Had they any power of compelling them to pay?—They acknowledged to me that they had not.

145. Will you point out the parts of your district which are in a particularly imperfect state, as to drainage and ventilation?—The next court is Green Dragon-court; there are six or seven houses on one side; every room has a distinct family, the smell is most intolerable; and I have felt when I have attended patients there, nausea and sickness of stomach; and where the sewer is so bad, I have had many cases of typhus fever, and also cases of consumption; and where small-pox occurs in those families, it is generally of a very malignant kind. Then proceeding from the south to the north, is St. John's-court; illness is never out of that; the animal and vegetable matter that is allowed to lie, even human excrement is lying in the centre of the way, and a person has to pick his steps in passing down.

146. It is very much neglected?—Yes; and the drainage also.

147. Are there other portions of the populous district in that quarter neglected in the same way?—Yes; Elliott's-court, Dean's-court, Phœnix-court, Crown-court.

Jordan Lynch, M.D.

25 March 1840.

148. You mention those as courts; is there a thoroughfare of air directly through them, or has it only an entrance at one end?—Some have a thoroughfare through them, and others have no passage through them.

149. Do you not conceive it is important for the health of the inhabitants that there should be a current of air through them?—Yes; in the first place those are generally very narrow, and in each room there are frequently more than there should be; and on a cold day they are generally apt to stop up every inlet for the air, and they tell you, if you find fault, that if it keeps out the cold, it keeps out everything which is bad, and it is useless to remonstrate with them; even when a patient is ill you may turn them out, but the moment the doctor's back is turned they are in again.

150. Mr. *Ponsonby.*] Do you often find more than one family in one room?—No, there is not room; those are the remains of old London, some of them have been built 300 years.

151. *Chairman.*] Are there any new buildings to which these observations apply?—In St. Bartholomew's there is New-street, in the centre of a very sickly neighbourhood; the drainage is defective; the common sewer runs for 300 or 400 yards between the rows of houses; there are two streets, and there are backs abutting on each other, and an open sewer in the centre of the backs of the two streets; this open sewer is running; they throw the refuse of every description into this sewer, and perhaps it remains there decomposing until twice a week, when there is a good supply of water, which carries it away.

152. Do you believe that the neglect of covering over the sewer is the cause of fevers in that district?—I think it is an accessary.

153. Is there any other district besides those you mention in which there is a neglect of drainage?—Immediately on the very threshold of my district there is the Fleet Ditch, open for better than half a mile, nearly a mile, from Snow-hill up to Clerkenwell-green, and the mouths of all the different sewers, as they run down the declivity from each side, empty their contents and trickle down the wall into the sewer, and the smell is intolerable.

154. Are there many houses near it?—It is a mass of life all along; the back windows open directly upon it which the working classes occupy.

155. How is the district you have referred to supplied with water?—The supply is good on the days in which it comes in; twice a week, I think.

156. Mr. *Patten.*] How comes it to be twice a week only?—I believe that is the arrangement made with the water company.

157. Mr. *Walker.*] Is the supply such as to wash the drains?—Yes; it is a rapid, strong stream, which carries away refuse of every description.

158. Is that supplied by the water company?—I suppose the water company do not contemplate that, but the people permit it to flow over, and it carries off many things of an offensive character.

159. *Chairman.*] Are there any other portions of the town you are particularly acquainted with?—No. I have been occasionally called to visit cases of a fever in a lane from the back of Aldersgate-street to Golden-lane, and from Golden-lane to Bethnal-green, a distance of half a mile, and it is a *terra incognita*; you might live half a dozen years in London and never know those places; but any person who goes into the district will be surprised at the immense mass of misery and impurity there.

160. Do you consider that any improvement in the sewerage and drainage of those places would very much improve the health of the inhabitants?—I think it would, certainly.

161. Would it not save considerable cost to the parishes, by preventing many of the inhabitants being affected with illness?—Most decidedly.

162. Mr. *Patten.*] What is the condition of the inhabitants?—Many of them are labourers, and others very poor artisans. In West-street they are of the lowest description of persons.

163. Are they labourers in regular employment, or whose employment depends on accidental circumstances?—They are day labourers. A great number of them are Irish people; and when the husband is out of work, the children and the family live upon the parish.

164. Lord *James Stuart.*] Do a great number live in one room?—Yes; I have been in a room, not more than seven feet long and six broad, in which there were four women and two men sleeping every night; they were sitting round the fire smoking their pipes when I went in.

165. They were all sleeping together in that room?—Yes, constantly.

166. Mr.

166. Mr. *Patten.*] You are not aware of the amount expended in any one parish in that district?—I believe it is 1,000 *l.* a year in St. Sepulchre's parish; but taking it upon the whole, it is 4,000 *l.* or 5,000 *l.* a year altogether, expended upon the pauper population.

167. Mr. *Cowper.*] Can you form any notion of the extent to which the fever generated in those districts has reached the better streets?—I know two cases from Back Bear Alley; it extended to the families on each side of the lane; it confined itself there; it did not not extend itself further.

168. Mr. *Patten.*] What is the establishment of medical men, beside yourself, attending this district?—I attend the northern district. I have a colleague who attends the south side, St. Bride's, and Ludgate-hill, and a portion of St. Andrew's.

169. What number of patients have you in your district?—The first year I had 1,100; the average is not so large now, it is about 700; I have had a great deal of typhus fever and small-pox.

170. *Chairman.*] Is small-pox very prevalent now?—It is not so prevalent as it was.

171. The want of ventilation and drainage makes those disorders more malignant, of course?—Yes; when we remove them out of those places into the workhouse, the mortality is diminished.

172. Lord *James Stuart.*] Were you there in the time of the cholera?—I was.

173. Was that very malignant in that quarter?—It was, very.

174. Mr. *Tufnell.*] Which suffer most from the disorders, the parents or the children?—Measles and small-pox generally among the children; typhus fever is particularly fatal to the adults.

175. Mr. *Walker.*] Is Field-lane within your district?—Yes; typhus fever is never out of that; the Fleet Ditch is running through the centre of it, and people of the lowest description living there; most of all, those courts are the receptacle of thieves and pickpockets, and the most abandoned of females.

Mr. *Samuel Byles*, called in; and Examined.

176. *Chairman.*] YOU live in Church-street, Spitalfields?—I do.

177. You have sent a Report upon the state of portions of that district to the Poor Law Commissioners, which is given in the Reports on the sanitary state of the labouring classes, page 26?—It is.

178. It appears from that Report that you are acquainted with that division of the Whitechapel Union, of which you have been the medical officer. You say, "I scarcely know what portions to describe as the worst; in Whitechapel parish, Essex-street, and its numerous courts, as Martin's-court, Moor's-court, Essex-court, Elgar-square," several numbers in the street, "George-yard, and New-court, in the same; Crown-court, Wentworth-street, and many parts of that street, all lodging-houses, have been the general and almost constant abode of fever for years past"?—That is quite correct.

179. Then you go on to say, "In Spitalfields parish, the other side of Wentworth-street, all Rose-lane, Magpie-court, Factory-court, many houses in Flower and Dean-street," several houses in "Red Lion-street, all Ireland-court and Cox's-yard, in that street, New-court, Vine-court, Vine-yard, Vine-place, the courts in Pearl-street, &c. have been equally prolific of fever cases;" that is a correct account?—Quite so.

180. You particularize one or two houses which have been visited with fever, and you say that in relation to those, "The same remark applies to Hudson's-court, Wheeler-street, and the houses adjoining the court; all these houses, and in fact the larger portion of what I have before specified, are old and dilapidated, and to this circumstance and the want of paint and whitewash, I attribute in a great degree the perpetuation of febrile disease; it is also a fearful fact, that in almost every instance where patients die from fever, or are removed to the hospital or workhouse, their rooms are let as soon as possible to new tenants, and no precaution used, or warning given"?—That is the case invariably, I may say.

181. "As to the drainage, it is so generally defective, and in all the courts and alleys, and some of the back streets, so much decomposing animal and vegetable matter accumulates, that I do not know how to particularize;" is that a correct account?—It is quite so.

 182. You

Mr. *Samuel Byles.*

25 March 1840.

182. You go on to state, with respect to certain other houses, that you consider them hot-beds for fever; you think that is not overstated?—Not in the least degree.

183. "And in those, as well as in houses let out to weekly tenants, scarcely any notice or care is ever taken where a patient dies, or is removed, but probably the first new-comer is put into the sick man's bed"?—That is the case; at the lodging-houses especially.

184. You say, you attended during the last year, out of the workhouse, about 600 cases of fever, a large proportion of which were clearly ascribable to the evils before alluded to; and you add, "I have met with no backwardness on the part of the local authorities to meet these evils, but at present they possess no means of so doing"?—That is the case; I believe there is some slight improvement in that respect, that under the New Police Act the district surveyor is liable to a penalty if a nuisance is pointed out to him and he does not take means for removing it.

185. Is the district you referred to in this Report inhabited by the poor of the working classes?—Almost entirely, except the principal thoroughfares.

186. They are the principal sufferers?—Yes.

187. Do you think that many are thrown upon the poor's-rates in consequence?—Yes; a great number of the poor inhabitants are a class of people living there for the sake of getting employed on the water side, coming to those lodging-houses to sleep, who pay from 3*d.* to 6*d.* a night for their beds, and if they have been without food during the day they are in much greater danger of taking the contagion of fever than persons who are able to withstand the contagion from good living.

188. Is much expense cast upon the parish by means of those fever cases?—I should think that half the money which is spent by the Whitechapel Union is spent on the cases of individuals who have no settlement in the union; casual poor who fall ill, and are ill for some days probably, before anybody is aware of it, then they are either attended at home or removed to the workhouse, which is attended with great evils, for there is a great want of infirmary room, and there is no place particularly for those persons in a very loathsome state brought there; they thus furnish the elements of contagion to others.

189. When you say that a great deal of expense is cast upon the parish in consequence, have they to bear that in consequence of the disorder generated or augmented by the circumstances you have referred to?—Yes, in many cases.

190. If that is the case, it would be a considerable saving to the parish in that respect if, by any improvements, those evils were got rid of?—Eventually it would be a great saving.

191. You state further, "A general and complete power of enforcing sanitary precautions is needed, as also an extensive improvement in the sewerage of the whole district. I do not think that any large outlay of money in erecting a local fever hospital would be advantageous; the influx of casual poor would be greater in consequence, and parochial burthens would be thus in every way increased; but I consider that the greatest benefit to the district would result from the opening of one or more spacious and extended thoroughfares, and that they would be a great advantage to the district generally;" is that your opinion?—Yes; I think opening a thoroughfare is of more importance than any other mode, for that would do a great deal of good, not only medically but morally, for many places I have described are hot-beds of crime of every kind as well as of disease.

192. It is a very neglected district?—It is; in fact some portions constitute a complete refuge for criminals of every description.

193. You state that a great deal of disease is generated by the want of ventilation and sewerage; is there any power in the Sewer Commissioners to oblige the parties inhabiting the district to communicate with the sewer, if they made one?—No; and there is unfortunately a paradox; there is a penalty on any person communicating from his house into the common sewer.

194. If they are assessed to it that is not the case, is it?—Yes; it appears to be a complete paradox; if privies are known to empty themselves into the common sewer, the person is liable to a penalty.

195. There is no power to enforce communication from the houses of the refuse water, and so forth, into the common sewer, on the part of the Commissioners?—Not that I am aware of.

196. They

196. They have no power of compelling them to bring a small drain into the large one, to prevent its being choked?—No.

197. Have they any power to prevent any receptacles for filth being laid down below the level of the common sewer?—I believe not, and I know it is commonly done. There is a common sewer through the main streets of our district, and along the main district of Whitechapel-road; but this common sewer is considerably higher than the level of many of the cesspools I am acquainted with; and there is a circumstance I would take the liberty of mentioning, that in many parts of the Tower Hamlets they depend almost entirely upon the ancient above-ground watercourses which existed for many years before the buildings which now stand upon the ground, and which found their level into the river when there were no houses; but almost every stack of buildings operates as an hindrance, and they become, instead of watercourses, stagnant ponds, and of course the sources of disease.

198. With respect to the buildings there, do you know what the building regulations are now?—No, I do not at all; the district I am acquainted wih has a number of very ancient houses, large houses, containing 10 or 12 rooms, and each room inhabited by a separate family.

199. What is the supply of water in the district?—The supply is very good; they are supplied from the East London Company three times a week, and have an extra supply on Sunday mornings for washing down.

200. Can you return the number of persons who have been attacked with fever in the district you are acquainted with?—My Report states that; I have had 600 cases.

201. In what population?—I think the whole population of the district is about 20,000.

202. Are those 600 wholly pauper cases?—Yes.

203. Are there any other cases of fever in persons just above the pauper class?—Yes, but not to that amount, I should think.

204. Do you know whether the tide comes into the old watercourses?—I think it influences the principal ones to a certain extent; I think it is what is called Nightingale Level.

205. Has any essential improvement been made in any of those sewers of late?—I do not particularly know of any. The sewerage of the principal streets has been looked into and cleansed, and I think the neighbourhood has been benefited. The back parts of this district are not connected with the common sewers; they have nothing but overground, surface drainage, and that is attended to only by the scavengers, but some of the courts and alleys they never enter.

206. They are very much neglected?—Yes.

207. Is there any system of inspection of the drainage, or the conveyance from the houses, or those various matters which affect the health of the poorer inhabitants?—I am not aware of any, except the surveyor of pavements, and I think his observation extends only to that part which comes under the observation of the Commissioners of Pavements; his power does not extend into the interior of the houses to look to the state of the privies or the drains.

208. Does his power extend beyond the pavement?—No, I think it does not.

209. Then it does not extend probably to those courts?—No; there is no inspection except when the people have suffered more than ordinarily with fevers, when the attention of the parish officer has been called to the matter; then they have gone round and represented to the inhabitants of the houses and the landlords the necessity of being more cleanly, but that has soon died away.

210. When you are alarmed by a great body of fever coming upon you, you begin to remonstrate?—Yes.

211. Then it dies away with the fever till things return to the old state?—Yes, that was particularly the case when there was cholera, and has been since on two or three occasions.

212. There is no regular attention to measures of a sanitary nature, to prevent the recurrence of those evils?—No; I think there should be a power from the Government; I believe it exists in some of the continental cities.

213. Do you not think, that some power of making an improvement in the drainage, and the inspection of those districts, to keep them in a clear state, would save a great deal of expense, by preventing those disorders being so prevalent?—Yes, I think it would.

214. And would much increase the comfort of the humbler classes?—Yes, decidedly.

Mr. *Samuel Byles.*

25 March 1840.

215. Are there a great many children in those districts?—A great many.

216. Is their health very much affected in consequence of the evils described?—When there is any prevalent disorder, it is rendered very virulent; small-pox is prevented in a great degree by vaccination; but when it does occur, it is generally of the confluent kind.

217. Are there schools in those districts for the children?—Yes, but not sufficient for the population; the children in our district are made useful to their parents at so early an age, they will not sacrifice their time by letting them go to school.

218. In what way are they made useful?—In winding bobbins for the weavers; they begin doing that at seven years of age, and when we get into the worst districts, the children are sent out to beg, and are beaten by their parents if they do not bring home a certain sum at night.

219. The efficiency of any school would be in some measure impaired by the state in which the children are when at home, would it not?—I should say, certainly it would; they have an exceedingly bad example.

220. And they live in a state of filth, misery and destitution?—Yes; that operates in this way, that the parents are ashamed to let their children go to school on account of the state of destitution they are in.

221. Mr. *Ingham.*] Are there any play-grounds attached to the schools?—No, I think not, except at one school, which was lately established, the British school in Hare-street Fields, I think they have a play-ground, but our national school has no playground; it was built in the most crowded part of the parish, where ground is most valuable.

222. Is there anything particular in the diet of the poor in the district, which you think disposes them much to disorder?—I think they eat a great deal of coarse bad fish.

223. The refuse from the ordinary fish-market?—Yes, it is taken off and carried to their garrets, and kept till next day perhaps.

224. When fish is supplied fresh, it is a healthy diet, is it not?—I think it is occasionally, but not constantly.

225. Do you know the state of health of the poor in those districts where fish is much eaten?—I do not.

226. *Chairman.*] Do they use cocoa much?—I think not much, unless where the children are employed in the factories connected with the silk weavers; there the children have cocoa for breakfast.

227. You think that very nutritious?—Yes.

228. More so than coffee or tea?—Yes.

229. Mr. *Patten.*] What are the wages of the weavers in the district?—I think they cannot earn, on the average, 10 *s.* a week.

230. What can a common labourer earn?—The greater part of them have no regular work; they go down to the docks and get from 2 *s.* 6 *d.* to 3 *s.* a day; but, in general, they do not have four days work: they are badly off.

231. Mr. *Tufnell.*] You have had opportunities of seeing the children of other persons in the same class of life, what is your opinion of the health, comparatively, of the children, in this district?—I think a smaller number reach to the years of maturity.

232. Is there any difference in their stature and strength?—I think very much, among the weavers; many of them are Irish, and their children are very fine children, but they are much disposed to inflammatory complaints; a great many die before ten years of age.

233. There is a marked difference in the stature and strength of the weavers' children?—Yes; I can point out, in passing along the streets, the child of a weaver: the women bear children with great difficulty.

234. *Chairman.*] What sort of silk goods do they weave, articles of luxury?—The weaving of Spitalfields is now in extremes, either the very richest or the very thinnest and poorest; the middling quality of silk is wove very much in Manchester, and the large towns in the north.

235. Mr. *Tufnell.*] Do you think those persons having lived in such a neighbourhood for a number of years, their children are subject to any particular diseases?—I think they are very much disposed to scrofulous diseases; their bones are softer, and they are subject to diseases of that kind; formerly the weavers could go out into the fields and get fresh air, but they cannot do that now.

236. Mr. *Walker.*] Is not their employment carried on in very close rooms?—Yes,

—Yes, they shut out the air to prevent the effect of it on the fabric they are forming.

237. *Chairman.*] That is an additional reason why the district about them should be clean and healthy?—Yes.

238. Mr. *Walker.*] Does the air which is let in affect the colour or the weight of the silk?—It affects the colour I know, and I believe it affects the weight also.

239. Mr. *Patten.*] What person is there in your district who has authority to remove nuisances?—The surveyor of pavements, I think, is the only one who has authority to remove nuisances.

240. How would the removal of a nuisance be carried into execution?—He would order it to be removed, and if the person neglected to remove it, he would be subject to a fine, I believe.

241. Is there any authority to compel any particular person to remove a nuisance lying in the street?—I suppose the person at the nearest house would be obliged to do it.

242. What class of persons are the landlords of those houses chiefly?—The houses are sublet very much; I question whether the original landlords, in a large proportion, are known at all; a great many houses are so sublet that all direct title is lost.

243. By whom are the rates paid?—They are generally paid by the person who holds a certain number; by a builder, for instance, who holds them and repairs them, and becomes answerable for the payment of the rates; that is a private arrangement between the owner of the property and the parochial authorities.

244. In the case of those nuisances, is he the person who would be obliged to remove them?—Yes, if the power existed to compel it, but there is no such power at present. There is one house which I have visited, which has been the constant habitation of fever for 15 years. I have enforced upon the landlords the necessity of cleansing and lime-washing it, but it has never been done. There was one house where there were five deaths in six weeks; there was such a horror that it was shut up for a few weeks, but at length the landlord let it, and the persons who came in were immediately attacked. I know one house which was shut up for two years after persons had died in it; and that the persons who next came in were immediately attacked; no person had paid attention to whitewashing or cleansing, in the interim.

245. Can you, as a medical man, suggest any regulations for rendering the place more healthy for the future?—I think if there was an officer of health in every neighbourhood, that would be sufficient, just as the relieving officer is an assistance to the medical officer. If I have a pauper patient who is under my care who is destitute of necessaries, the relieving officer under my direction supplies him with necessaries; so if there were an officer of health, if I could point out any house where, from being the abode of fever, precautionary measures were necessary, that would effect much.

246. Should that officer be connected with the Board of Guardians or the Commissioners of Sewers?—I think it should be a person independent of all local authority, and there should be a power of inspection.

247. Do you think that the Board of Guardians, whose interest it is to preserve the health of the neighbourhood, are not the most proper persons to have the supervision?—I think in our neighbourhood I could depend upon them for so doing; but that might not be the case everywhere.

248. Would it be a laborious office in each district?—No, I do not think it would.

249. Do you think it would occupy the entire attention of one person?—I think it would. In our union there are three medical officers; but I think such an officer as I refer to, might manage to look to the whole district, because it would be his single employment. The medical officers have private practice also to attend to.

250. By whom would you recommend that the orders of this superintendent should be carried into execution with regard to the removal of nuisances?—I think the order of the medical officer to this officer should be paramount.

251. There must be some expense attending this department; who would you recommend should defray that?—I think the expense must fall upon the county.

252. Mr. *Ingham.*] Are you aware that some fever hospitals in the country

Mr. *Samuel Byles.*

25 March 1840.

employ officers of this kind, at the expense of the governors of the charity, to whitewash?—Yes; and I believe that has been done by the Fever Hospital in London to some extent, but they frequently meet with difficulties.

253. *Chairman.*] At present, there is no power in the Commissioners of Sewers to compel the owners of houses to make drains, so as to connect every house with the sewer?—No; there is not.

254. A good system of sewerage and drainage, to be carried into effect for the removal of the evils from each of those houses, is the first thing to be attended to?—Yes.

255. With sufficient power to carry that into effect?—Yes.

256. Do not you think improvements in the Building Act, so as to prevent courts without air passing through them, and walls to prevent the access of air, would be desirable?—Certainly.

257. Do you not think this might be carried into effect by the local authorities in towns?—I think so.

258. In addition to this do you not think some inspector, having power to report to the authorities on the state of the district, would be desirable?—Yes; the state of the privies in our neighbourhood is particularly bad; I am scarcely ever sent to a case of typhus fever, but my nose is assailed as soon as I enter the house.

259. How are those privies emptied?—They are in the state I have described; there are many landlords with whom nothing but immediate interest has any effect; they are scarcely ever emptied, but they flow over into the streets; there are a number of them where the floors are quite rotten with the continual damp and wetness; these circumstances produce typhus fever continually. I have made a memorandum of a court, Wentworth-court, which used to be full of typhus fever; the houses have come into possession of a rich Jew, who has cleansed them, and I have not had a single case of fever for 15 months; it is entirely inhabited by Jews; the fumigation and lime-washing have answered the purpose to a great degree there, though there was no power of making sewerage: the lodging-houses are a great source of nuisance.

260. *Chairman.*] Is there a power of inspecting lodging-houses in that neighbourhood?—No; and they are inhabited by thieves and prostitutes in many instances; and I have actually known the lower classes of prostitutes following their vocation while they were labouring under fever, and compelled to do so by the mercenary character of the persons in whose houses they were lodging.

261. Mr. *Walker.*] Do those lodging-houses give accommodation to the labouring classes, or to those vagrants?—They give accommodation to both; and thus those, who were not so, become corrupted.

262. *Chairman.*] Is there any other fact you would mention?—I would suggest the great importance of a thoroughfare through our neighbourhood, which would break up a great deal of this; if the plan of the Committee on Metropolitan Improvements were carried into effect; a line has been recommended by the rector of our parish, and the authorities, which would do much; if we had a line traversing Essex-street, Rose-lane, Red Lion-street, Wheeler-street, and then on through a portion of Bethnal-green, Virginia-gardens, and Anchor-street; all the evils scattered over Bethnal-green are concentrated there; that is a very populous district, the houses are very large and very old, and there is nothing but a surface drainage.

Mr. *Robert Heelis*, called in; and Examined.

Mr. *Robert Heelis.*

263. *Chairman.*] WHERE do you reside?—In Limehouse.

264. Are you a medical man?—I am the medical officer for the Limehouse district of the Stepney Union.

265. What population is comprised in your district?—According to the last census it was between 15,000 and 16,000.

266. Of what class of persons?—Decidedly of the lower class; tradesmen, a very large proportion of mechanics, shipwrights, and engineers; they form the largest proportion; and a great many labourers, that get their living by working in the docks.

267. Will you have the goodness to describe the state of the district with which you are acquainted with regard to drainage and sewerage, and the state of the habitations of the poorer classes, and any measures which may appear to you proper with respect to the sewerage, and so on?—The habitations occupied by the labouring

labouring classes may be divided into two descriptions: one, the ancient town, the old part of the parish; and another, a very considerable portion, more modern, which has grown up with the docks; the old part is adjoining the river; they are principally wooden houses, with their roofs very much dilapidated; the streets are very close and confined. The more modern part is decidedly improved generally; small houses, occupied always by more than one family, and generally speaking, better adapted for the working classes.

268. What is the state of the sewerage and drainage particularly?—There are some open ditches still remaining; the ancient drainage or sewerage; there is one in particular; several others have been arched over within the last 10 years; the tide comes up the whole of them; there are others there in a very filthy condition, and in the neighbourhood there is always fever, and that fever generally of very malignant character.

269. Are the houses you refer to within a short distance of the open sewer?—Within three yards of it.

270. Do you conceive that the fever which occurs in those houses arises very much from that circumstance?—I have every reason to believe so, for, in other respects, they are small, convenient houses, and modern.

271. It is the neglect of the drainage being covered over?—Yes.

272. Does that affect a good many, or very few?—There are not many houses in the immediate vicinity of this sewerage; there is an open space, a neglected field, which was immediately opposite this. In the year 1838 I had very nearly every family attacked with fever, and the heads of many of those families were carried off; that arose, I conceive, from this cause.

273. Are there other districts in which those evils have occurred?—We have another sewer which is partially covered; it is covered here and there; in the confined parts of the town it is covered. That comes all the way from Shoreditch.

274. Does that affect the health of the inhabitants?—It does.

275. Does it pass through a populous district?—It passes through a most densely populous district.

276. Do you conceive the health of the inhabitants has been affected by that circumstance?—Yes, certainly.

277. What is the state of the drains communicating with the sewerage from those small houses; is it perfect or imperfect?—Very imperfect.

278. Are there any small courts, into which your medical attendance obliges you to go?—Yes.

279. Is there the same circumstance in operation there?—Yes.

280. Is the absence of cleanliness in attending to those the cause of the illness which prevails?—Yes.

281. Is there any officer who sees that this refuse is cleared away from those small courts?—There is no officer who has the power of seeing to the removal of those nuisances.

282. Is it neglected in many instances?—In the main streets the scavenger comes and clears away tolerably well, but the narrow courts and alleys are entirely neglected by the scavenger; he never enters them.

283. The narrow courts and alleys are the very places where those nuisances most prevail?—They are.

284. They are the very places which ought to be attended to?—Yes; in many of those confined places they keep pigs.

285. In your opinion does the health of those poorer persons suffer from the want of proper drainage, and the proper enforcement of due regulations for cleansing and keeping them clean?—That is my opinion.

286. Are there any dilapidated houses in that district?—There are many in the old parts of the parish, they are all dilapidated; they are very ancient in their structure; generally they are lath and plaster, and damp, as I mentioned before, in very close streets, as old streets frequently are; they are very confined.

287. Can you give any particular instances which occur to you, in which, from the want of some authority to take care of the state in which they are, they are much neglected, and evils occur in consequence?—The cholera first made its appearance in this parish, and on that occasion there was a little excitement, and it was found, that though on the side of the street in which it occurred, the Commissioners of Sewers had covered over one of those open ditches, there was not a proper communication with that drainage, but that the old drains were running over, and in the most filthy condition. In that street I think there was not a house but what lost an inhabitant in the cholera.

Mr. *Robert Heelis.*

25 March 1840.

288. Were those dilapidated houses?—Yes, every one of them; and the drainage or communication with this large sewer with these very old houses was very imperfect; many of the houses never had any communication into it.

289. Mr. *Cowper.*] There was no efficient drainage in that street?—No; there was a sewer, but the owners of the houses did not avail themselves of it.

290. *Chairman.*] Are there any houses which have been taken down?—Some houses, a short time ago, in an alley called Globe-alley, in the corner of the room there was no roof whatever; the rain descended in the corner, and carried away the ceiling of the floor below. In that house there was a family living.

291. At present if a house is in such a miserable state as to be likely to injure the health of the tenant, and so forth, is there any mode of procuring inspection; the lodging-houses, and so on?—No, none whatever.

292. Suppose fever to prevail in a house, and the family to be obliged to leave it, or to die there, is there any power to compel cleansing and whitewashing before fresh persons go in?—There is none.

293. Do they let them again without that being done?—Yes; there is one house closed now, in consequence of the death of the keeper of a lodging-house; in that house I attended lodger after lodger with fever.

294. Would it not be a proper regulation, for the purposes of the preservation of the health of those poor persons, that there should be some power of inspection of the state of such houses to which they continually go, and that they should be properly ventilated and cleansed?—It would be exceedingly desirable.

295. Is there any power of obliging the persons having houses near a sewer to drain into it?—There is no power to oblige them to do it.

296. Notwithstanding the main drain is so near them, yet there may be no communication between the houses and the drain?—No; that was precisely the case in the street to which I have referred.

297. Is there any power to prevent their sinking cesspools or receptacles for filth below the level of the common sewer?—No, not that I am aware of; I think there is not.

298. Would not some such regulation be a great advantage?—Yes; to have an efficient drainage, it would be necessary. I will just mention one circumstance which bears me out as to the necessity of drainage in the preservation of health; the alley in which the cholera first made its appearance; there was a little excitement at the time; the Commissioners of Sewers covered over an open ditch which ran through it; that alley, since I have lived in Limehouse, now between 14 and 15 years, I never knew without fever, but since that was covered, I think, with only one exception, I have not had a case of fever, and that was an exceedingly dirty family, of filthy and dirty habits.

299. What is the name of that alley?—White's-rents; these houses are in a very dilapidated state; there are not so many occupied as there were, but those are not fit for the habitation of any human being; it would be desirable to have them pulled down, but there is no power of enforcing that.

300. Mr. *Tufnell.*] Has not there been a great deal of building in that district?—Not within the last seven or eight years; 10 or 12 years ago it was rather overdone, and in consequence of that a great many houses were unoccupied.

301. Upon the parts which have been lately built, has there been better care taken for draining?—No better care taken for draining; but the houses are better adapted for the working classes; there is no better drainage whatever in the district; where they are modern houses, there is no continuance of sewerage; in the old district there is not a sewer constructed by the Commissioners of Sewers; it is a private drainage which they have, and I think a very bad system too, for in consequence of this, the drain belongs to a number of individuals, and it is difficult to get those individuals in one mind to cleanse it. The first street we have in Limehouse, Church-row, inhabited by most respectable persons, is drained by a private drain, running down in front of the houses; that drain has not been opened for more than 20 years; every one of the inhabitants is complaining of the nuisance, but still they cannot get them all into one mind to have it cleansed; there is no general power to enforce it; the Commissioners of Sewers have no power over it; and many of the inhabitants of that Row have opened the drain, immediately in front, at considerable expense to themselves, but still it accumulates again, it is of no advantage to the drainage; a private drainage I consider very bad.

302. *Chairman.*] There should be some power of enforcing a good general drainage?—Yes.

303. In what district of the sewers is the place which you now mention?—The Tower Hamlets.

304. What is the supply of water?—That is tolerably good, I think.

305. Are you aware whether there are any general regulations with respect to buildings, as to enforcing a certain degree of width between the houses, and making the courts open, so as to allow a current of air to go through them?—I do not know whether the inspector has authority for that; there is an authority as to the structure, to render them safe from fire; party-walls, and so on; but I am not aware that he has any authority to widen the space, or allow a space between streets, or boundary-walls, or anything of that sort.

306. There is nothing to prevent such a construction of houses as shall make them subsequently unhealthy to those who reside in them?—No, not anything of the kind.

307. Mr. *Patten.*] Can you state the average number of patients you have under you, in the course of a year?—One thousand two hundred.

308. Do you know what proportion of those are fever cases?—Not a very large proportion; about 200, I think.

309. What are the most prevalent diseases you attend to there?—The diseases principally are among the children; the greatest mortality we have is amongst the children, in consequence of the miserable dwellings that they are forced to live in; and we lose a great many from inflammation of the lungs, in consequence of exposure to the cold.

310. Have you ever made a comparison between your district and other districts in London?—I should conceive ours is pretty healthy in comparison with some others.

311. Are you intimately acquainted with any other districts?—No, my practice out of the parish lies principally on the water side, more in the adjoining parish of Poplar and the Marshes.

312. What do you consider to be the state of the districts on the east side of London?—Certainly, higher up, in Whitechapel and Ratcliff, I should say, are decidedly more unhealthy parishes than the one I have to do with, and Shadwell.

313. Mr. *Ingham.*] In what Union is Limehouse?—In the Stepney Union.

314. Have you not a school for the reception of all the children belonging to that union?—Yes; I have the charge of that school.

315. Mr. George Frederick Young is the treasurer of that school?—Yes, Mr. Young is chairman of the Board of Guardians, under whose control the school is.

316. They teach them work as well as literature, do they not?—Yes.

317. There is a spacious piece of ground attached?—There is.

318. Have you observed the health of the children after they have come to the school?—It is remarkably good.

319. Mr. *Tufnell.*] What is the number of the children in those schools?—At the present time about 400; the last year we did not lose one per cent.

320. Mr. *Cowper.*] Is the school placed in a thickly populated part of the district?—The building is, rather; but still there is a very spacious play-ground.

321. Mr. *Ingham.*] There is a master to teach them gymnastic exercises to promote their health, is there not?—Yes; and everything which can be adopted for the promotion of their health and comfort is done.

322. Do you find children who come there retain their health?—Yes, they are all young; they have all the mortal diseases to which we all know that young children are liable. Taking that into consideration, I consider it a most healthy establishment; and it is a fact, that though we have 200 under six years of age, we have not lost one per cent.

323. Mr. *Wilson Patten.*] Are you acquainted with the medical conduct of any other districts which have been spoken to to-day?—I am acquainted with the medical men.

324. Are they all conducted on a similar plan with your district?—Yes.

325. Those gentlemen have made an average of 700 sick in a population of about 19,000 or 20,000?—Those gentlemen stated 600 cases of fever; I have had 200 cases of fever.

326. Mr. *Walker.*] Do you not consider 12 ½ per cent. of a population as a very large amount to come under the superintendence of a medical officer?—It is a large amount, particularly at the parish expense; those are all paupers.

327. Do you attribute that large amount of medical relief to the great vigilance and care which the guardians take of the poor?—It appears a large amount,

Mr. *Robert Heelis.*

25 March 1840.

amount, but it must be taken into consideration that we have no dispensary, or other charity of any description, within a very considerable distance; many have dispensaries or hospitals within a convenient distance, and therefore these do not appear, perhaps, so many in proportion; we have no dispensary within a mile and a half.

328. *Chairman.*] Yours is rather a destitute district in other respects, is it not?—We have the labouring classes of the docks; they get a very precarious living; they are principally Irish, and they live together in one house in immense numbers. The other day I attended a case of fever, which I sent away. In that house there were 32 individuals living, and in the cellar of that house there were pigs kept.

329. Are there a good many children in this district?—A very great proportion.

330. Do you not think that the state of destitution and neglect you have referred to has a very injurious effect upon them?—It has a very bad effect.

331. Do you not think that the effects of attending school, however well conducted during the day, is a good deal neutralized and done away by the bad example, and filth and dirt, and want of cleanliness and decency they see at home?—Yes; but the greatest proportion do not go to school at all.

332. Upon those who do go, those things would still have a very bad effect, would they not?—Yes.

333. Mr. *O'Brien.*] Have you ascertained what proportion go to school?—I can only judge from the number of children and the number of schools; we have a parochial school which professes to take 500; I rather think it is something short of that; then there is an infant school lately established, which has 170; that is a very small proportion of the whole children of our neighbourhood.

334. Mr. *Walker.*] Is the school you superintend entirely devoted to paupers?—Entirely to paupers; they are either orphans, or the parents are in the Union workhouse.

335. *Chairman.*] Is there a British and Foreign school?—There is not in that parish.

336. Upon the whole, they are very destitute of schools?—Yes.

337. A great proportion are of the working and poorer classes?—I should say five-sixths.

338. Mr. *O'Brien.*] Can you give any opinion as to the means of providing a remedy for the evils you represent to the Committee to exist in this neighbourhood?—No, I have not paid particular attention to that; there clearly ought to be some authority; I think the Board of Guardians would be the best authority to place it in the hands of.

339. Mr. *Tufnell.*] At what period of the year is fever most prevalent?—In the autumn and the winter; but they are very different kinds of fever: the most fatal is in the winter season.

340. Does it arise at all from want of fuel?—Yes; I intended to have mentioned that circumstance. I think the price of fuel affects the general health of the younger classes of this metropolis exceedingly; and there is another thing in the construction of houses; that there ought, in my opinion, to be stoves or grates, or something of better construction than there are now; in many of the poor people's houses there is no stove whatever: it is not the part of the owner of the house to supply them; and especially for the labouring classes, who are very migratory, and have very frequently no fire-place at all, and, if they have any fire, the greater part of the heat goes up the chimney; and very few of them have their stoves set, because they remove their residences so frequently; consequently they do not get the benefit of the fire they have.

341. Mr. *Cowper.*] Will you specify in what way the want of fuel operates on the health of the labouring classes?—The younger branches of families decidedly require a degree of warmth, which they have not; then again, the houses which are not very well constructed and are not warm, they frequently are damp; in the modern houses, the sand they make use of in cheap buildings, where they build at a small expense, is the sea sand, and it always becomes damp; it gives, as it is called.

342. *Chairman.*] Would it not be an advantage, in your opinion, if there was a plan, drawn by competent authority, pointing out the best mode of constructing habitations calculated for the reception of the working classes; giving plans for the construction of rooms, and pointing out the most economical mode of the consumption of fuel, which plan might be a kind of pattern of the best kind of cottages,

cottages, afford information to builders and so forth?—Some, perhaps, might adopt it, but I fear it would not be general. Mr. *Robert Heelis.* 25 March 1840.

343–4. Are you aware that there is any such work at present?—I am not.

345–6. Mr. *Ingham.*] Are you aware that there is a London tax on coal?—Yes.

347–8. Mr. *Wilson Patten.*] Does that affect the price much?—I am sure I cannot say.

Veneris, 27° die Martii, 1840.

MEMBERS PRESENT.

Mr. Baines.	Mr. Ponsonby.
Mr. Brotherton.	Mr. R. A. Slaney.
Mr. Cowper.	Lord James Stuart.
Mr. Greene.	Mr. Tufnell.
Mr. Ingham.	Mr. R. Walker.
Mr. Wilson Patten.	

R. A. SLANEY, Esq. IN THE CHAIR.

Mr. *Edward White*, called in; and Examined.

349. *Chairman.*] YOU are a medical man?—I am. Mr. *E. White.* 27 March 1840.

350. Residing where?—In Lamb's Conduit-street.

351–2. A portion of the Holborn Union is under your medical superintendence?—I am one of the medical officers of the Holborn Union.

353. Would you be kind enough to state to us the district with which you are best acquainted?—The Union consists of the parish of St. George-the-Martyr, Queen-square, the upper portion of St. Andrew's, Holborn, (what is called above the bars, out of the City,) and the liberty of Hatton-garden, Saffron-hill, and Ely-rents.

354. Is that a district in which there are a great number of the working classes?—A great number of the labouring classes.

355. What is the condition of it, with respect to sewerage, draining, and cleansing, throughout the whole of the district or locality you have mentioned?—I would beg to state, that my duties do not extend further east than Leather-lane, therefore I am not so well acquainted with that portion which comprises Saffron-hill, the most dirty and most densely populated of the Union, and where the drainage has been worse attended to than any other part of the Union.

356. We will only go to the parts you know; with respect to the portion you are acquainted with, what are the circumstances in the respects I have mentioned?—I should say the most unhealthy part, and where disease most generally prevails among the poor, is between Gray's-inn-lane and Leather-lane.

357. What is the state of the drainage and cleansing there?—There is a long street,—and I happen to know a little of the drainage, from being a member of the Board of Health at the time of the cholera in 1832; and a good deal was then done to improve the drainage of the parish, but it is capable of very great improvement still,—there is a long street called Baldwin's-gardens, with 80 houses in it; it extends from Gray's-inn-lane to Leather-lane, and there is no sewer down this street.

358. Is it inhabited chiefly by the working classes?—One end is more particularly so, and closely confined.

359. There is no sewer there?—No sewer down the street.

360. What is the state of the cleanliness of it?—Many of the houses in a very filthy state, and badly ventilated.

361. In your judgment, have any fevers arisen from this neglect?—I think there have.

362. Is there any other district you would mention particularly?—There is a place or court called Tindal's-buildings, opposite the entrance into Gray's-inn.

363. Is there a place called Back-hill, and also Eyre-street-hill?—Yes; they are more healthy places; they are much worse houses in Tyndall's-buildings.

 364. Garden-court?—

Mr. *E. White.*

27 March 1840.

364. Garden-court?—Yes, there is that place.

365. I have a statement that there have been several bad cases of typhus there? —Yes, there have.

366. Are those places drained?—Very badly drained; they have no common sewer; I consider Tyndal's-buildings the most unhealthy part of my district; I think there are 20 houses in it that are inhabited almost exclusively by poor Irish labourers and their families; they are very densely crowded; perhaps, in a room of half this size, there would be from a dozen to 15 people sleeping in it; the rooms are dark, and badly ventilated, and the filth of those houses for the most part enters into a kind of back cellar or open cesspool, frequently without any covering over it, from which a malaria arises at certain periods, very pernicious to the health of the inhabitants. There are some houses in this court that are hardly ever free from fever; there was a woman and a child sent from there to the Fever Hospital about three weeks ago; they returned cured; they had not been back six weeks before the mother had another attack that proved fatal.

367. Does that arise, in your opinion, from the neglect of cleanliness?—Yes; partly from that and the filthy habits of the inhabitants.

368. Mr. *Cowper.*] Is there any outlets in Tyndall's-buildings?—No; and very few of the houses have any windows, except on one side; they are built as if against a wall.

369. *Chairman.*] There is a place called Fox-place, Feathers-court, Portpool-lane, and another court leading from it?—Yes; Portpool-lane is the same length as Baldwin's-gardens; the health of that place has been improved by Messrs. Reids, the brewers, pulling down many houses to make a yard.

370. There are many similar places described in the Report from that Union to the Poor Law Commissioners; Baldwin's-gardens, Baldwin's-place, and many other places of that description; some parts of Eagle-street and Little Ormond-yard?—Yes.

371. Is it an accurate account to say that they are in a bad and neglected state?—Yes.

372. That is, as to drainage, dirt, and so on?—Yes.

373. Mr. *Cowper.*] Do you know Portpool-lane?—Yes.

374. Has there been much fever in that neighbourhood?—Yes; this lane runs parallel with Baldwin's-gardens. I am not aware that there is a sewer down it; I believe not.

375. *Chairman.*] Those districts of which you have spoken are neglected in point of sewerage?—Yes.

376. Is there any system of inspection to see that they are kept regularly cleaned or swept out, or the cesspools emptied?—There is a court-leet existing, but those gentlemen very seldom make an inspection of the parish, except where a house is reported as likely to tumble down.

377. Is there any system of inspection likely to lead to the cleansing of those places?—No, not any.

378. Would it not be a great advantage to those persons that such should be the case?—Yes; it would very much tend to promote their health if the simple act of whitewashing could be performed. There are houses three stories high; there are eight rooms in the house, and in each of those rooms a family is residing, and the whitewasher's brush does not appear to have been used for years.

379. Do you know of any instances in those neglected recesses of houses and apartments being infected with fever, the family going out and others coming in and taking the fever?—Not in the same room. I have always recommended whitewashing, and it is generally done.

380. Do you think it desirable to have some authority to whitewash and cleanse those houses?—Yes; it would be a most salutary regulation if the room was fumigated and cleansed.

381. Has the parish been put to a considerable expense in consequence of the increase of disease arising from these causes?—Yes; I have known of cases where the parents have both died in consequence of the fever, and the children sent to the workhouse.

382. A regulation of that kind would be a benefit to the parish?—Yes.

383. Mr. *Cowper.*] Do you consider that the typhus fever is of the nature of a malaria fever?—Do you mean the exciting cause of it?

384. Yes.—Yes; I think it arises clearly from the poison generated in the locality,

locality, and there being a predisposition, from a bad state of health, or a peculiar state of constitution, or intemperate habits.

385. So that the expense which falls upon the parish by the propagation of typhus fever might be saved, if there was no infection in the district?—I think so, certainly.

386. *Chairman.*] This is a very crowded locality?—Yes, the most crowded.

387. Can you give us any notion of the population in the district you have spoken of?—No.

388. Are you anxious for the inhabitants to get into any open place to get fresh air?—Yes.

389. Do you not think that it would be an advantage if an open space was reserved for public walks for the people?—Yes, very much so.

390. You think it would promote the health of those persons?—No doubt of it.

391. Mr. *Cowper.*] Have you had any opportunity of comparing the London population of the poorer classes with that of the country, as to their physical condition?—No, I have not.

392. Have you observed a great difference in the physical condition of the people who live in the districts you have described and those who live in better ventilated streets?—Yes, I have, decidedly.

393. Have you found greater weakness among those residing in close situations?—Yes, and a more emaciated appearance and greater debility generally. I think in those districts full one-third of my out-door patients are natives of Ireland, or their children. It appears to me that those people, though they get employed as labourers, seem to have no idea of paying anything for lodging; only 1*s.* or 1*s.* 6*d.* per week. Now in those buildings I have mentioned, I do not think there is an English family; there may be one, but it is almost entirely confined to Irish labourers.

394. They do not attach much importance to their lodgings?—No.

395. *Chairman.*] Have you observed in those localities where this negligence prevails, that the health of the children is much injured by the want of ventilation and the closeness?—I think that the children in those places, unless very strong, die early; that is the reason that people say they appear so healthy; if they are not healthy they are carried off.

396. You think that this want of cleanliness is injurious to the health of the children?—Yes; I have had cases of typhus in children of seven years and upwards.

397. Does it increase the malignity of the small-pox?—Yes, very much so.

398. Mr. *Cowper.*] What is the health of the children in the Union generally?—In the workhouse, do you mean?

399. Yes.—They are very healthy.

400. Are they out of town?—They are all now in the union-house in Gray's-inn-lane; they have as good health now as when at Barnet, and better than at Norwood; we had many die there.

401. Mr. *Tufnell.*] How many years have you had charge of this part of the parish?—Two years and a half; I have been a medical man in the parish for upwards of 20 years.

402. Has there been any considerable increase of building in that neighbourhood?—No; it is an old part of the town; in some places old houses have been pulled down; the Messrs. Reid have pulled down a great number of small houses, and have made an opening, and there is better ventilation; there have been no open spaces built upon.

403. Do you know whether the health of the people has been worse of late years than it was formerly?—No.

404. It has been improving?—Yes; there was less fever last year than in the year before; I have the number of cases of fever in my pocket; it prevailed much in 1838.

405. Mr. *Walker.*] You attribute a part of the increase of the healthiness to the improved habits of the people?—Yes, to a certain extent. In 1838 I had 210 cases of fever; 11 died and 27 removed to the Fever Hospital. In 1839, 120 cases, of which 7 died and 14 removed to the Fever Hospital.

406. Mr. *Cowper.*] Do you attribute that to the season?—To the less malignant nature of the fevers.

407. Not to any general improvement of the district?—No.

408. *Chairman.*] Do think that the district still needs improving?—Yes; I think

Mr. E. White.

27 March 1840.

I think the health of the poor might be improved by increased draining and cleanliness, and ventilation; and if you get the people more temperate and moral, they will become more cleanly.

409. Do you not think that this neglected state of the courts as regards cleanliness and drainage, and decency, has a very considerable effect upon the moral character of the children?—Yes, they run about half naked.

410. If they go to school in the day, the habits they see have a bad effect upon them when they return?—Yes; the bad habitations injure their health, and the bad habits they see injure their morals.

John Wood Wilkes, called in; and Examined.

J. Wood Wilkes.

411. *Chairman.*] YOU are the relieving officer of the Holborn Union?—Yes.

412. And well acquainted with the district spoken to by the last witness?—Yes.

413. Do you confirm his general account of the want of cleansing and ventilation, and draining, which he has spoken to?—I do.

414. Do you believe the evils he has spoken of arise from those causes?—Yes; there is a sewer down Leather-lane and Gray's-inn-lane, but in the intermediate courts there is nothing of the sort. With respect to Saffron-hill it is very unhealthy, the houses very old, and very populous, and the inhabitants of them extremely filthy and dirty, and with the exception of the Fleet Ditch, which is near there, there is no drainage of any sort, which is certainly very much wanted.

415. The poorest districts, which, from the habits of the people, would require the greatest attention and the greatest facility to carry off the filth, appear to be the most neglected?—Yes, they do; these two districts, the eastern part of Gray's-inn-lane, and then the eastern part of Leather-lane, or the Saffron-hill district; those two districts very much require draining.

416. Now, with regard to ventilation, there are in that populous district you have mentioned many courts and alleys through which there is no current of air?—There are numerous courts and alleys, and some few have no current of air.

417. Courts in which they are built up at one end?—Yes.

418. Are those courts inhabited by the persons spoken of?—Yes; those courts are, particularly behind Gray's-inn-lane and Saffron-hill.

419. To the consequence of the negligence you have spoken of, or the want of those due regulations, do you attribute the ill health in the district in some measure, and the fevers which prevail there?—Yes; doubtless illness arises from the situation.

420. Have there been fevers in that district?—Yes, frequently.

421. Have you many cases that came to you for relief in consequence?—Yes, several cases; the number of fever cases we have sent to the hospital I can speak to generally; these are considered desperate cases; they are sent upon the recommendation of the medical officer; I do not send any without medical advice. We had 18 the first year, 43 the second, and 83 the third; we are now in the fourth year, and have sent 23; we have rather improved in respect of fever cases this year.

422. Are those cases of fever from houses in this neglected part of the town, and do you attribute them to this state of dirt and filth?—Yes, I do.

423. Do you think that the filthy condition of many of the populous districts spoken of is likely to encourage fever?—I do.

424. Mr. *Cowper.*] Can you state what amount of expense was thrown upon the Union by the cases of fever you have alluded to?—We pay a guinea with each patient; if they are there only a few hours, a guinea; if for days, a guinea; that is the charges.

425. Are there a great number of fever cases that do not go to the hospital?—Yes, several; Mr. White returned 110 or 210; there are very many.

426. *Chairman.*] Are the habits of the poorer classes in the districts you speak of, reckless and intemperate?—Yes; and many of them are very filthy in their habits. They are principally confined, I must say, to the Irish; they are very indifferent about what sort of lodging they have. It is no uncommon thing to find five or six families in a small room. I have seen a donkey in the same room;

room; and I have seen, upon another occasion, pigs living in the same room; and also stale fish. *J. Wood Wilkes.*

27 March 1840.

427. Are the lodging-houses occupied by the Irish, or other persons as well, casually?—Behind Gray's-inn-lane, we call that part of it Little Ireland, there are a great number of Irish there, and at Saffron-hill.

428. That is the place you have described as wanting drainage?—Yes.

429. It needs it more than the other?—Yes.

430. Mr. *Tufnell.*] Has the want of ventilation and drainage attracted the attention of the local authorities?—Yes; and it has been attended to on one or two occasions; but under the Metropolitan Police Courts' Act there is a very beneficial clause with respect to cleansing these houses. I believe that the guardians are empowered and can complain to the magistrates of any particular house or houses, and the magistrates have the power to summon the inhabitants or the owner of the property; and if he does not cleanse the property within a certain time, seven days I believe, the magistrate can direct the parish officer to do it, at the expense of the owner. It is a recent Act, as you are doubtless aware of, but much good may be done by its being carried into effect.

431. With regard to the sewerage, has any representation been made to the commissioners; you say there are only two districts in that situation?—No; only two.

432. Has any representation been made to the commissioners?—I do not know; my duties are rather confined to that of relieving-officer.

433. If those cases of fever are caused by malaria arising from want of sewers, it is strange there should not have been a representation made to the commissioners?—We have had no increase of fever; but this state of things must cause fever.

434. The lower classes that inhabit these places are only casual residents?—No, the Irish reside there for years; many families have resided there for years.

435. Have you any manufactory there?—No, not in our Union.

436. Is there any particular demand for labour?—They are principally bricklayers' labourers, and stonemasons' labourers, and navigators.

437. Do you find any difference between the habits of the English and Irish labourer?—Yes, certainly; I find the English labourer more cleanly in his person and habitation; he is not so content to put up with anything.

438. Their families are more free from fever?—Yes.

439. You have not had any instances in your district of any improvement taking place in the buildings in regard to ventilation and the consequent improvement upon that change?—No; at the time of the cholera there was a general cleansing of our parish by the paving board, which produced some benefit.

440. Do the poor suffer from want of fuel very much?—No, with the assistance we give them; there is a good deal of charitable relief in our parish, so that they do not suffer much from want of fuel in our Union, and I have been rather surprised at it; I have generally found them with good fires; there has not been that scarcity of firing I should have expected. When I visit them, as I make it my duty to do, if I find them in a deplorable state, I order all of them into the house.

441. *Chairman.*] Is there a good supply of water in this neighbourhood?—Yes, by the New River Company: there is no scarcity of water.

Mr. *John Clarke,* called in; and Examined.

442. *Chairman.*] YOU are the medical officer of the St. Olave's Union?—Yes. *Mr. J. Clarke.*

443. You speak to a populous district below London-bridge, on the Southwark side of the river?—Yes.

444. What parish is it?—The Union consists of three parishes, St. Olave's, St. John's, and St. Thomas's parish.

445. Is it chiefly inhabited by the working classes?—There are a great number of the labouring classes inhabiting it, who are obtaining a precarious livelihood from the wharfs.

446. Extending from London-bridge along the side of the river, and extending inland?—Yes; but not far inland.

447. Does it cross the line of the Greenwich Railway?—The line of the Greenwich Railroad intersects it.

Mr. *J. Clarke.*

27 March 1840.

448. Be kind enough to describe to us the state of that district, with relation to the habitations of the poorer classes, as regards draining and cleansing and ventilation, and any circumstances that affect the health of the working classes, arising from any neglect in those respects?—The labouring classes, who are inhabiting the district over which I preside as medical officer, are principally inhabitants of Ireland, who come over here seeking to obtain a subsistence from their labour. They are very densely crowded together, inhabiting chiefly the courts and alleys pervading the district in every direction; the houses are of the very worst description, badly built, and ill provided in every respect. Most of them have the light obtained only from one side of the house, consequently there is no thorough draft of air through the tenement. In many courts a single privy is provided, accessible to all the inhabitants of the court, and this privy is placed over a common sewer or ditch, often without any covering whatever. The inhabitants are not very particular and careful in their observances of cleanliness, and consequently it frequently happens that those privies are in the most filthy state that can be conceived.

449. Mr. *Wilson Patten.*] Does this apply generally to the district?—In some part of it it is unfortunately very general; in other parts, where there is a convenience attached to the house, it is placed over an open ditch; those ditches or sewers, as they are called, pervade the district in every direction. They terminate, many of them, in a large sewer recently constructed, and others empty themselves into the Thames.

450. *Chairman.*] Do they pervade the district in every direction?—Yes.

451. Mr *Walker.*] Is there much fall in those ditches?—No, very little; some of those ditches, at high tides, are filled with the water from the Thames, and others not; it depends upon the height of the tide whether the water runs into them or not. In some cases the privy is immediately over the ditch, and in others not so; of course the fluid that accumulates in those ditches is of the most filthy description, and the effluvia emanating from them at some seasons of the year are of the most noxious kind, and the inhabitants living in this locality are very liable to fevers for a number of months for nearly two years I was never without cases of typhus fever on my list.

452. *Chairman.*] Arising, do you think, from those causes?—Yes, I believe arising especially from those causes; the habits and mode of living of the inhabitants predisposing them to attacks of fever.

453. What number of persons, speaking not very closely, do you think inhabit this district?—I can hardly state accurately the number of the labouring classes.

454. Are there many thousands?—Yes; I should say between 5,000 and 6,000 of the labouring classes inhabit this district.

455. Mr. *Walker.*] What proportion of the population do you suppose to be of the labouring class?—One-third; our district comprises about 21,000, and one-third consists of the labouring population that inhabit the locality I have spoken of.

456. *Chairman.*] The description of open ditches and stagnant places you describe apply chiefly to the localities inhabited by the working classes?—Yes; but those ditches unfortunately run into other districts inhabited by shopkeepers and others.

457. Does the neglect you have spoken of, in your opinion, generate fevers, and operate most injuriously to the health of those poor persons?—There is no doubt that the habits and modes of living of the poorer classes in this district predispose them to attacks of fever; and their residence in this locality subjects them to fever.

458. You have said there were many Irish there; are there any English labourers?—Yes, there are some; but those I speak of obtain a precarious livelihood, by working day-labour on the wharfs.

459. Do they earn good wages?—No, very scanty wages, not sufficient to maintain their families; and many of them set their wives and children to work at sackmaking and other things.

460. They are not able, by the wages they earn, to get the kind of food that would fortify them against the attacks of disease?—It is not sufficient to provide them with adequate and nutritious food.

461. Mr. *Wilson Patten.*] What is the average of their wages?—It is impossible to tell; they are employed at the wharfs, by which they obtain so much per hour;

hour; they may get two or three hours per day, and sometimes a whole day's labour.

462. *Chairman.*] Where people get only an insufficient supply of food, is it not necessary that they should be guarded from disease, by a better mode of ventilation, and sewerage, and draining?—No doubt it is of the utmost importance.

463. What is the supply of water there?—Very good; but it is obtained from a small cock, which is placed generally in the courts, to which all the inhabitants have access at a certain hour in the day.

464. With respect to the drainage coming up to those houses in the courts, are there any covered drains that come up to them?—None whatever; there is only a little gutter frequently provided in the centre of the court, which is not sufficient to answer the purpose of drainage; the inhabitants care nothing about drainage, and throw out into the open gutter all their offal and refuse.

465. Is there any system of inspection by any competent authority having the power to cleanse away the offal and filth, and to see that they have sufficient drains carried up to the houses?—I believe it is directed to be done, but there are no persons who feel sufficient interest in it to see that it is done.

466. Is it done?—No.

467. Mr. *Wilson Patten.*] Whose duty is it?—The leet jury, I believe. I have, for several years, in my report to the board of guardians, dwelt upon it as strongly as I could, inasmuch as I see so great an increase in the expenditure for the poor, from the diseases prevailing among them, arising from bad drainage.

468. Have the leet jury the power of remedying it?—Only by presenting it.

469. Whose duty is it to make the alteration?—The Commissioners of Sewers. The Commissioners of Pavements are the parties whose duty it is to see that these courts and alleys are properly cleaned.

470. Are the Commissioners of Sewers obliged, upon the presentation of the leet jury, to lay down sewers?—I am not aware that they are obliged to do it.

471. You have made repeated representations, and they have not led to any removal of the evil?—No.

472. Mr. *Tufnell.*] Have any representations been made to the Commissioners of Sewers by the board of guardians?—Yes, I believe there have; but I am not aware of the result.

473. *Chairman.*] Are there a good many children in that district?—There are a great many children indeed; and sickness is exceedingly prevalent among the children, as much from the negligence of the parents as other causes.

474. Do the children attend schools, most of them?—I believe very few of them. We have recently established in the district Infant and Sunday schools, which many of the parents avail themselves of; but, generally speaking, the children are in a miserable state of neglect.

475. Mr. *Wilson Patten.*] How many schools have you in the neighbourhood?—We are favoured in having a very large grammar-school, of the Elizabethan foundation, which takes in all classes of the people; whoever can obtain a presentation from a governor can send his boy; and we have between 600 and 700 boys educated at that grammar-school.

476. *Chairman.*] But notwithstanding that, there are many who do not go to school?—Yes; those are the children of the labouring classes, who would not be admitted without decent clothing.

477. And those who do go to school, and avail themselves of those advantages, is it not your opinion that the neglect of decency and comfort they see at home tends to do away with the advantage of education at school?—Yes, most materially, I believe it does.

478. So that the bad example they see there has a great effect upon them?—Yes, no doubt of it.

479. Mr. *Wilson Patten.*] You have stated the amount of population was 21,000?—Yes.

480. State the average number of patients you have under your care, from one end of the year to the other?—I could state, with tolerable accuracy, the number of cases of fever which have occurred in a particular period.

481. I mean the cases of illness generally?—We see from 50 to 80 patients daily during the year, at the charge of the Union.

482. Now state the number of fever cases?—Fever has not prevailed latterly

Mr. *J. Clarke.*

27 March 1840.

so much in our district as formerly; last year we had only 40 cases of fever in the house, whereas in the year preceding we had 110.

483. Does the small-pox prevail in that district?—Very much, latterly.

484. Have you observed whether those who have been vaccinated are, from their modes of life, more liable to take the small-pox than they would be under other circumstances?—Yes, most certainly; I have an instance under my care of a woman who has taken the small-pox in a very modified form, from nursing her child; she lives in this district.

485. Is there any repugnance among the labouring classes to vaccination?—No, it is merely from neglect.

486. Have you seen the Bill, for the purpose of vaccination, passing through Parliament?—No; I have heard of it.

487. Do you think there would be any repugnance, on the part of the labouring people, to have a person there to enforce vaccination?—No, I think not; they would have no objection to it if it could be obtained with little trouble to themselves.

488. Mr. *Tufnell.*] Have you had many cases of cholera there?—Yes, the cases that occurred, first occurred in that district.

489. Mr. *Wilson Patten.*] Do you find that vaccination modifies the disease (small-pox) in that district?—Yes, very much indeed; it hardly requires medical treatment.

490. Mr. *Parker.*] The parish of St. Olaves is a very flat parish?—Yes.

491. Very little undulation?—None.

492. Very little above the level of the river?—It is not above the spring tides.

493. Do you consider that there might be, by mechanical means, a perfect system of drainage, by having a sluice to open at low water, and close as the tide rises?—Yes.

494. Mr. *Tufnell.*] Have you had any cases of cholera lately?—Yes, a few have occurred.

495. Were they cases of English cholera?—No, they were cases of real cholera.

496. Mr. *Wilson Patten.*] What has been the extent of the mortality in your district compared to other districts?—I do not know that it prevails more in that district than in others; but where there is much sickness, of course there is a great deal of fatality; the number of cases of fever in the last year, compared with the preceding years, would not average more than one-fifth.

497. At what season of the year do you find typhus fever more prevalent?—Not in one season more than another.

498. Mr. *Tufnell.*] To what do you attribute the improved health of the district?—I cannot tell; but although the last season was so wet, we had fewer cases of fever; I believe it arose from the quantity of rain cleaning out the ditches.

499. *Chairman.*] The rain cleansed out the ditches and purified them?—It answered that purpose.

500. Mr. *Wilson Patten.*] Do you happen to know the amount of poor-rates paid in that district?—No, not exactly the sum; but in the last three or four years it has been reduced more than one-half.

501. You do not know the amount?—Not the exact amount.

Neil Arnott, M.D.

Neil Arnott, M.D. called in; and Examined.

502. *Chairman.*] YOU, I think, have made, in conjunction with Dr. Kay, a Report to the Poor Law Commissioners, "on the prevalence of certain physical causes of fever in the metropolis, which might be removed by proper sanitary measures"?—I have.

503. That is printed in the Fourth Annual Report of the Poor Law Commissioners?—Yes, I have seen it there.

504. In referring to that Report, in which you state the causes of fever in various districts, I venture to turn to nearly the bottom of the 12th page, where you speak of "the means of removing completely the noxious animal and vegetable matters brought to or produced in cities"?—Yes.

505. You have before stated that you think the neglect of drainage and the removing of offal, and dirt, and filth, from the great towns, is the cause of fevers?—Yes.

506. And

506. And many other illnesses?—Yes.

507. Be kind enough to turn to the beginning of No. 1, and just state to us if you consider the statement you have made there would be effectual in diminishing very much the mortality, particularly among the humbler classes; you state, first, "A perfect system of sufficiently sloping drains or sewers, by which from every house and street all fluid refuse shall quickly depart by the action of gravitation alone; the streets, alleys, courts, &c. being moreover well paved, so that the refuse may be easily distinguished and detached;" that is one of the means you have spoken of as being efficient?—Yes, for the removal of those causes of disease.

508. That would be applicable to all large towns and populous districts?—Yes, universally.

509. Secondly, "A plentiful supply of water to dilute and carry all such refuse, and to allow of sufficiently washing of streets, houses, clothing, and persons"?—That is equally necessary.

510. Thirdly, "An effective service of scavengers, to remove regularly the rubbish and impurities which water cannot carry away, and fit receptacles for such matters until removed," that also would be necessary?—I think all those very important.

511. "Free ventilation, by wide streets, open alleys, and well-constructed houses, to dilute and carry away all the hurtful aeriform products of the processes of society;" ventilation is most important?—Yes, ventilation is most important.

512. You have also stated the necessity of keeping away at a distance from the people the practice of all the arts or processes capable of producing malaria?—Yes; of which there are a great many carried on in the neighbourhood of large towns.

513. I observe you particularly state burying-grounds, in one part of it?—Yes.

514. Are you of opinion that the practice of burying in very large towns, without covering deeply the bodies, is very dangerous?—Yes; I have no doubt cases of disease arise from it, and the malaria arising from those burying-grounds injures the health of the neighbourhood.

515. Lastly, you have stated the necessity of preventing the great crowding of the lodging-houses of the poor?—Yes.

516. You are of opinion that attention to those points would very much increase the health and comfort of the labouring classes in large towns?—Yes.

517. Then we go on generally to the want of proper attention to those points in London; and without going to the several instances mentioned, I would go down to where it states "At the request of the Poor Law Commissioners on the 1st of May, we inspected parts in the eastern extremity of London, about Wapping, Ratcliff Highway, the parish of Stepney, &c. from which many patients with fever had been carried to the hospitals. We found, as we were prepared to find, wherever the fever had appeared, one or more of the causes now to be noticed." Was that the case?—Yes, it was.

518. You have inspected those populous districts to which I have ventured to call your attention, and found the predisposing causes to fever in many of them?—Yes, as here stated.

519. The causes are detailed below: "1. Houses and courts or alleys without privies, without covered drains, and with only open surface gutters, so ill made that the fluid in many places was stagnant; 2. Large open ditches, containing stagnant liquid filth; 3. Houses dirty beyond description, as if never washed or swept, and extremely crowded with inhabitants, who had no means of separation in case of disease arising among them; 4. Pigs kept in back yards with sties very filthy, and masses of half putrid food for the pigs in receptacles around, which in one instance were in the back room of the house, with an open door to the front room, in which was lying a man in the last stage of fever; 5. Heaps of refuse and rubbish, vegetable and animal remains, at the bottoms of close courts and in corners." Did you find those cases arising in many parts of the district which you have looked over?—We ascertained that the persons who had been carried to the fever hospital from that neighbourhood were from the houses we were examining, in which we found those causes existing.

520. Do you feel any doubt that the cases of fever and ill health you noticed arose from some of those causes?—I have not the slightest doubt of it.

Neil Arnott, M.D.

27 March 1840.

521. You state, remedially, at the top of page 14, "We have no doubt that by proper sanitary police regulations, such as a public board of health might decide upon, the typhoid fevers of London and other places might be made to disappear, and we think the remedial measures would cost less than it now costs to parishes and public charities to take care of the sick, and to provide for the helpless widows or orphans of those who die." Is that your confirmed opinion?—Yes, it is.

522. That is applicable not merely to the crowded district east of London, to which we are now alluding, but also to any crowded districts of large towns in the realm?—Yes, wherever typhoid fever arises, or diseases of that kind.

523. Would it not be likely that the diseases that afflict the inhabitants of this district would arise in other towns similarly situated?—Yes, no doubt they do arise.

524. Then without troubling you to go through the minute detail of what you saw in those districts, I venture to call your attention to the districts generally of Bethnal-green and Whitechapel, and the east of London?—I have passed through those on many occasions, and made a similar remark, that the situations were calculated, from the causes here described to be in existence, to produce the fevers I knew to be in existence; that was the impression upon my mind, and that the fevers that arose in those districts spread in proportion to the prevalence of those causes.

525. Would not also the negligence spoken of increase the virulence of small-pox, measles, and scarlatina to which children are subject?—I believe malaria injures the health of people generally, and that every disease that affects them would be more serious in its consequences.

526. Did you observe the want of sewerage and drainage, and cleanliness and ventilation, in many portions of the populous districts of Bethnal-green and Whitechapel?—Yes, I did, when, from curiosity or other causes, I have passed through them, I noticed those circumstances.

527. You think that the labouring classes suffer severely from the neglect of those regulations which might be made, that would be beneficial to them and to the parish at the same time?—Yes, I do.

528. Generally the places that are alluded to in this report you have seen, and you believe the report to be a correct one?—It is a general review made on the occasion to which this refers, when I went with Dr. Kay; but I recollect particularly, that on several occasions where we saw houses where fever was likely to arise, we found that in one case the inhabitants had been all sent to the Fever Hospital, or had been affected with fever, showing we had accurately fixed upon a spot likely to occasion fever, and that seemed to be proof there was no mistake as to the cause.

529. Do you happen to have in your own knowledge any cases of districts affected with fever from the same causes, which, being subsequently drained, have been improved, and, by a cleansing taking place, the fever has left it?—I have mentioned one remarkable instance in this report.

530. Near Clarendon-square?—At the commencement of the Birmingham Railway, at the back of Euston-square, there was a lake of filth rather than a ditch, which used to overflow at certain seasons, where 100 cows were kept, and fevers were very common in a school where there were 150 children; at the season of the autumn, when malaria is likely to prevail, diseases of different kinds manifested themselves every year, different diseases, according to the season, but proceeding from the same cause. Since that drain has been covered up, such diseases have ceased entirely.

531. Would like effects arise from similar improvements elsewhere?—No doubt.

532. Do you not consider that the labouring classes in the eastern districts of London are particularly liable to diseases of this kind, in consequence of not being able to get, in their circumstances, the strengthening food which they ought to have?—I believe the want of nourishing food would be one of the causes rendering these exciting causes active, and is of as much importance as any of the causes that have been mentioned: want of food would weaken the health of the parties, and render them more susceptible of injurious impressions.

533. Mr. *Wilson Patten.*] Do you know what the general food of the labouring classes in those districts is; do they eat much meat?—Yes, I think they do;

do; many of the men who work on board the ships drink large quantities of porter, and eat meat. Perhaps the wives and children have but a small allowance, but the man takes care of himself.

534. *Chairman.*] You think the situation of the working classes renders it more particularly necessary that care should be taken in draining and cleansing the neighbourhoods of their habitations?—Yes, they are exposed to want of food now and then, and the injurious influence of that privation would be much more important when the other causes here described are in operation.

535. You have been kind enough to state your general views and the result of your knowledge of particular localities in the eastern part of London; can you give us any information of any neglect or want of improvements in any other districts round London?—I think on the outskirts of London generally, where it has been the practice to begin to build small houses, that no attention was paid to the drains; in many situations there are streets without any sewers.

536. Can you mention any of them?—I passed yesterday near the entrance to Kennington Gardens, the north side, where there was a number of small houses, and there was no outlet; they have been obliged to make drains since a better class of houses have been constructed, and to dig deep; there were many small houses near to the ditch, and I have heard that disease prevailed there to a considerable extent.

537. You are of opinion that in the suburbs of London where there has been a great increase of building, there has been great neglect in these respects, of draining and sewerage?—Yes, there have been great neglects; there is no law enforcing the construction of drains as part of the habitation.

538. Mr. *Wilson Patten.*] Do you know where cottage property has been built that drains have been made?—No, I do not.

539. It is generally the case where cottage property is built, that drains are not laid down?—I believe it is so; that there is no compulsory law.

540. *Chairman.*] You think that some compulsory power to enforce the regulations as to draining and cleansing is in large towns necessary?—Yes, most important and necessary.

541. Do you think that some kind of regulations as to some improvement in building, that is to say, as to distances and openings for ventilation, would be beneficial to the health of the poorer classes and all classes?—I think there is not much error in that respect; the streets are wider in London than in many towns, and in the new parts of the town the streets crossing at right angles; there is much to be learned with respect to ventilation, and the interior; as the agents are invisible there, the malaria arising from the lungs of people often remains, doing great injury, and is unsuspected altogether, and the diseases are attributed to other causes.

542. You do not happen to know the number of courts in London through which there is no thoroughfare?—No; there are a great many, no doubt; but even in a *cul de sac* the wind blows in; where there is an accumulation of filth, of course it is bad, but the air blows in.

543. Do you not think it desirable that they should be built open at both ends?—Yes, certainly.

544. Have you heard that in Manchester there are 2,000 courts without any thoroughfare, where people reside?—Yes, and when narrow, they become the receptacles of filth.

545. Mr. *Wilson Patten.*] If they were kept clean, would there be sufficient ventilation?—Yes, but that is impossible; where people are not passing, the inducement to throw things down is so great.

546. *Chairman.*] If there was some party authorized to keep them clean, it would not be so objectionable?—No; if the filth was removed, there would be much less objection to the form of the court; but if it leads to an accumulation, the only means to prevent it is by ordering the court not to be closed.

547. Do you not think that in consequence there should be some power in some competent authority to enforce a communication between the common sewer and the houses, to take off the refuse?—It is one of the most important regulations that could be made.

548. Do you not think there should be a power to prevent the cesspools being dug below the level of the sewers?—Yes, I do.

549. Mr. *Wilson Patten.*] In what quarter would you recommend that authority

Neil Arnott, M.D.

27 March 1840.

authority to be vested?—The Commissioners of Sewers require to be superintended by other authorities; they have separate interests, and there should be a board of health.

550. Should they be connected with the board of guardians?—That might be the means of carrying it into effect, as they would have an interest in seeing that those useful changes were made; but I am not prepared to speak decidedly upon that subject.

551. You do not mean to recommend that a board of health should be established for that purpose?—No; but that there should be a body of men who should look around them, to see the cause of diseases, and that they should point them out to another board in order to get them removed.

552. That board could not be established without a great expense; where would you recommend that that should fall?—It would not be attended with great expense, even throughout the whole kingdom.

553. You would have it established throughout the kingdom?—Yes.

554. *Chairman.*] Do you not think that a board of health, without saying where the authority should be vested, if it was duly administered and attended to with respect to the health of these districts, would pay its expenses over and over again?—Yes, I think it would be excellent economy; for the same reason there is a surgeon appointed to a ship or a regiment, whose duty it is to go round and see there is nothing existing injurious to the health of the crew; I think there should be a body consisting of several to watch over the health of the community, and see where there are causes existing injurious to the health of the public.

555. You think it would be a saving in point of expense?—Yes.

556. Do you not think it a matter that would be a debt of justice to the great body of the labouring classes, that there should be a body of that kind?—Yes.

557. Mr. *Walker.*] Admitting that body to be formed, do you not think that a recommendation from that body to the board of guardians would be sufficient to effect those improvements?—Yes, I think so; some of the guardians being the most enlightened and public-spirited men of the neighbourhood, they would be most happy to know what could be done to obtain so great a good.

558. Do you not think that that would be a cheaper mode rather than arming a board of health with the requisite powers?—The board of health should not be the body to carry it into effect, but the board of guardians would be the most eligible body.

559. Mr. *Wilson Patten.*] You are aware, under the New Poor Law Act the board of guardians are empowered to contract with a medical man for the superintendence of the district?—Yes.

560. Under the recommendation you have just now given you would do away with that power, as being contrary to the principle of a board of health?—There must be medical officers to take care of the sick; the duty of the board which I now speak of would be to prevent illness. The medical officers are now paid for curing the sick when they present themselves; but the duty of the board of which I speak would be, to look around and prevent disease, which is much more easy than to cure it.

561. Are you aware that under that Act of Parliament a contract can be entered into?—I am not aware of it. I have not attended to it particularly.

562. Mr. *Tufnell.*] Do you think that those fevers that exist among the lower classes spread to the higher classes?—Yes; and I might mention a case in my own neighbourhood, where the drains were in bad order: two of the young ladies have been at death's-door, and I am not sure that one will not die. On making inquiry, I found that the house had been in the occupation of two or three families within a few years, and it appears that the servants and other members of the families, which were there in former years, were taken ill of fevers, and removed, and some died.

563. What do you consider the most healthy part of London?—The north-west of London; they have the most pure air, from the prevailing winds being south-west and north-east, which winds do not blow over London to them; on the elevated grounds in Marylebone parish the air comes to them pure, as much so as Hampstead; and, as far as depends upon the air, those are the better parts of the town.

564. But not as to the drainage?—Being elevated they can drain them very well.

565. Do you perceive that where the drainage is better the habits of the people are more cleanly?—It will tend to that; where filth is unavoidable, it makes people careless of making a little addition to it; it does not shock their feelings as if all was clean.

566. *Chairman.*] Does it affect the condition of the children?—I believe it affects the health of them.

567. With respect to the moral habits of the children, if they go to school and come back to a place filthy, does it affect them?—No doubt it has an effect upon them.

568. Mr. *Tufnell.*] In these close and confined districts, where generation has been living after generation, has it had an effect upon the health of the children?—Yes; no doubt, in the fenny, marshy districts of England, the people acquire an appearance which distinguishes them from the inhabitants of the elevated districts; that is the malaria acting upon them; and no doubt the atmosphere of a town will operate upon them in the same way. An individual, the offspring of persons successively living in bad air, will have a constitution decidedly different from a man who is born of a race that has inhabited the country any long time.

569. The race will continue degenerating?—Yes, to a certain extent.

570. That applies itself to the neglected, dirty districts of towns?—Yes; most particularly.

571. Mr. *Cowper.*] Do you mean it produces an effect upon their outward, physical frame, as well as their constitution?—Yes; it makes its mark upon the person; we can distinguish the inhabitants of a town from the country.

572. And the inhabitants of those crowded alleys still more?—Yes.

573. Have you observed, in the course of your practice, that the houses situated opposite to gullyholes have been affected with fever?—Very likely; it is very injurious breathing so impure an air as results from that. I have not known an instance, but I have no doubt it does produce that effect.

574. Mr. *Greene.*] In the course of your examination in different parts of London, was your attention directed to the places where animals were slaughtered by butchers?—I have seen all of them.

575. Is it not the case that some of the small butchers slaughter their cattle in cellars and places below the level of the streets?—I know they do.

576. Where there must be considerable difficulty in getting away the offal and blood?—They would scarcely venture to do it if there was not a sewer leading from the place.

577. Still, is not the practice of slaughtering cattle in closely peopled places highly injurious?—Yes.

578. *Chairman.*] Any plan by which they would be got rid of would be an advantage?—Yes; and many other things of the kind that exist in large towns.

579. Mr. *Greene.*] Practically, there is less mischief arises from putrid animal matter than putrid vegetable matter?—That depends upon the state of it. Putrid animal matter becomes, in a certain state, a positive poison. When the body of a person buried has been taken out again, or a grave opened, the effluvium has knocked the parties (to use a common phrase) down, and produced a disease that has ended in death in a few days.

580. There is no regulation with respect to the places where cattle are slaughtered?—No; in London attention is paid to the draining and clearing away those offensive matters, and less injury arises than formerly; but still I have no doubt that injury does arise, and the neighbourhood must be unhealthy.

581. *Chairman.*] A board of health, such as you have alluded to, would turn their attention to matters of this kind, and give such suggestions as their experience might dictate?—Yes.

582. And that would be highly desirable?—Yes, they would have saved you the trouble of making this investigation; they would have had their attention constantly turned to it.

583. Mr. *Ponsonby.*] Have you found the neighbourhoods of churchyards very unhealthy?—Yes; there have been cases where people have been taken ill upon a grave being opened when living in the neighbourhood of a church-yard, but the hidden enemy has not been suspected; the errors committed from want of knowledge are extraordinary. I heard, at the Zoological Gardens, of a class

Neil Arnott, M.D.

27 March 1840.

of animals where 50 out of 60 were killed in a month from putting them into a house with no opening in it but a few inches in the floor; it was like putting them under an extinguisher; and this was supposed to be done upon scientific principles.

584. Mr. *Wilson Patten.*] Have you paid much attention to the morals of the labouring classes in London?—My attention has been attracted to it.

585. Could you speak to the increase or decrease of drunkenness among the labouring classes?—I have not attended to that so closely as to make a comparison.

586. Have you had an opportunity of making an observation upon their habits in that respect?—Yes; I live up in Bedford-square, and pass through St. Giles's often on a Saturday night, and it is a most extraordinary scene.

587. Have you seen the effects, generally, of drunkenness?—Yes; a man who is in the habit of drinking becomes a patient in the hospital, and one then sees the consequence of the habit.

588. Have you observed that children in the metropolis have been affected, even at birth, by the drunken habits of their parents?—The poor children sent to the workhouse exhibit in their constitution the effects of those habits.

589. Immediately upon being born?—Not immediately, but soon after; in stunted growth and general appearance.

590. Do you think, speaking of the labouring classes of London, that their health is more deteriorated by local circumstances, or habits of drunkenness?—It is difficult to make a comparison; drunkenness will destroy the constitution; but children often come before the parents have acquired the habit, and do not exhibit what the parents have become eventually, which prevents the race becoming extinct; when men become drunkards the children born after that time die very soon.

591. Have you ever turned your attention to the quantity of spirits consumed in this district at the present time, compared to former years?—No.

592. *Chairman.*] Spirit drinking prevails in the locality you speak of?—Yes, very greatly.

593. The evils are very great?—Yes.

594. Mr. *Wilson Patten.*] Do you think that the evil has increased in a great degree in the last few years?—Yes, I think so; those gin-palaces show more profit has been made by that branch of commerce than formerly.

595. *Chairman.*] The eastern and northern parts of this great metropolis are extremely crowded; would it be beneficial to those districts if there were reservations of open spaces made in the way of public walks, in which the poorer classes could go to get fresh air on Sunday, or on holidays?—Yes, I think exercise in the open air highly useful.

596. Mr. *Wilson Patten.*] The open spaces that exist in the eastern parts are not beneficial to health?—No, they are full of ditches and stagnant water.

597. *Chairman.*] Would the same remark, as to open spaces, apply to great towns, generally?—Yes, I think it applies generally.

598. Mr. *Tufnell.*] Do the lower classes suffer much from want of fuel, or the uneconomical use of it?—Yes, and having no fire at home they go to a public-house and sit there; and many of them believe that taking spirits internally warms them and answers the same purpose as going to a fire: they think it a question, which of the two ways will warm them best, not deeming it more injurious to health to warm them in the one way or the other. The want of fuel is particularly felt, and it is known that disease prevails to a much greater extent when the winter is severe; from that cause persons drink more and suffer more in various ways.

599. Would it be possible to devise more economical means of employing fuel for the poor?—Yes, I have turned my attention to that subject; and in second edition of a little pamphlet I published a short time ago, I think I can point it out.

600. So that the poor might warm their houses and cook their food?—Yes, they could do it for 1 *d.* or 2 *d.* a day, and the machinery would cost very little; I have had a model prepared for the purpose, which will be particularly described: Count Romford suggested something of the kind some years ago, but he had not thought self-regulation necessary to it.

601. Mr. *Wilson Patten.*] Are you aware that societies have been formed in many parts of the country to take advantage of your invention?—Yes; but the whole

whole science and philosophy of heat were not well understood, and there have been many popular errors upon the subject, and many reasons given that have been fruitless; but the facts now familiar to all minds will make the reason clear, and a very important change may be effected soon.

602. *Chairman.*] Does not it happen to you to know, that the mode in which the poorer classes use the fuel they have, is one the most expensive and the least beneficial that can be devised?—Yes, nothing can be much worse or less judicious.

603. So that those poor persons make less of the little fuel they have than the richer classes?—Yes.

604. The improvements in fire-places, which have been brought forward by scientific men, have done a great deal for the fire-places of the rich, but not to the habitations of the poor?—Yes.

605. Are you aware of any treatise upon the subject, particularly relating to fire-places of the poorer classes, and the building their cottages and dwellings?—Yes; the first publications upon the subject were those Essays of Count Romford.

606. They were many years ago?—Thirty or 40 years ago, but it was not to the taste of the people to study the subject; there was some little difficulty in it, and very few architects understood the essays.

607. Mr. *Ponsonby.*] Have you found the poorer classes ready to avail themselves of those improvements?—Yes, they would be, if the advantages were clearly shown to them.

608. Are they not wedded to old systems?—No, not in this country, there are so many novelties exhibiting every day; they do not believe that the world is always to be as it is now.

609. Mr. *Walker.*] In your contemplated improvements, will there be any plan in the machinery by which cooking can be facilitated?—Yes, it is a cooking apparatus.

610. You consider that of great importance to the poor?—Yes, it is quite essential. The purpose of a fire is generally that of cooking; they are often obliged to do without a fire at other times.

611. Is it not the habit of the poorer people to have their food cooked at a baker's, or a cook-shop?—Yes, and pay more for it than would suffice to keep them warm for 24 hours, as well as cook their food.

612. Do you not consider that the greatest improvement in their domestic comforts would arise from that circumstance?—Yes, I think so, independent of the saving of expense.

613. Mr. *Cowper.*] Have you any suggestions to make upon the ventilation of their houses, as well as the warming?—Yes, they go together; the people being warmed, the ventilation will improve itself; it was left to mere accident and misapprehension of what is going on, and when parties have interfered with it, it has been to make it worse than before; some egregious blunders have produced injury instead of benefit.

614. The people are not aware generally that a close room is very unhealthy?—Yes.

615. Mr. *Tufnell.*] With this system of consuming fuel there is an improved system of ventilation?—Yes, the two go together.

616. Mr. *Cowper.*] Do you know to what extent the poorer classes breathe fresh air in London on Sundays?—Yes; many go from their house, and those who have not fit clothes conceal themselves.

617. Can you say anything of the effect upon the health of remaining the whole year round in the confined atmosphere of a town?—It must be very injurious, and produce a weakly constitution and liability to diseases, and, when certain diseases arise, leading to a fatal termination.

Mr. *Edward Evans*, called in; and Examined.

618. *Chairman.*] YOU are relieving officer of a district in Southwark?—I am; a surgeon.

619. What district do you superintend?—The parish of St. George's, Southwark.

620. Are you the medical attendant of a portion of that Union?—It is a parish alone, not an Union.

Mr. *Edward Evans.*

27 March 1840.

621. That is a very populous district, I believe?—About 42,000 inhabitants.

622. There are a considerable number of the working classes resident there?—Yes; a great many.

623. Is the Mint in that district?—Yes, exactly so.

624. There is a district called the Mint, in Southwark?—Yes.

625. Is that crowded with the humbler classes?—Yes; almost every individual is of that class.

626. Be good enough to describe to us the district inhabited by the labouring classes there with respect to drainage, cleansing, and ventilation, and any point in which it appears to you to be neglected, and to have injured their health?—It appears that The Mint is very much crowded with dilapidated houses; they have not paid any attention to it for many years; it is all tumbling down, and it is choked up for want of proper ventilation. There are a great many lodging-houses there, four or five of them, and not less, on an average than 400 or 500 come there every night to those cheap lodging-houses, paying 2*d.* a night.

627. Are those places very much neglected in point of filth?—Yes; you can hardly get up to them without seeing it.

628. With regard to the drainage?—Where the houses are so much neglected, the yards are very filthy, and the cesspools are overflowing with water and filth; and where they keep their ashes, and so on, are in a very filthy condition; throwing out the cabbage-leaves, and everything they have they throw out into those back-yards.

629. And very much neglected?—Yes.

630. Are there drains to them all, or are the drains neglected?—Sometimes when there is a considerable quantity of rain for a day or so, you find the yards covered with water for want of drainage into the proper sewer; there is always a little gutter to carry the water into the sewer, but with dust and other neglect it is overflowed; very often it is dangerous to get into the back premises, from the smell of the effluvia.

631. These gutters are open gutters?—Yes.

632. And loaded continually with filth and dirt?—Yes.

633. Is the neglect of those gutters, from the filth thrown out, injurious to the health of the inhabitants?—Yes, very much; during the time of the prevalence of the cholera and influenza, 12 months ago, the typhus fever was very prevalent, and I was obliged to go to those houses two or three times a day, and not one person only, but two or three, one after another.

634. Did that arise in a great measure from the neglect of the cesspools and draining?—I have no doubt that it added to the fever very considerably.

635. Do you think neglected drains and cesspools have a tendency to bring on fever?—Yes, where there is a slight predisposition to it, they may bring it on and continue it.

636. How are they off as to water?—I believe they are very well supplied with water, and good water.

637. In that respect they are not deficient?—No.

638. How is it supplied?—By pipes from the different main-pipes in the street.

639. With respect to this district that you say is neglected, how many do you think there is of the population of the working classes situated in districts neglected in this way?—I cannot give you an answer to a hundred or two, but 3,000 or 4,000.

640. This is in the centre of a very populous district?—Yes, one side of our own parish, but in the centre of a populous district.

641. Are there any other drains or cesspools open to the air?—Not in the Mint exactly, but upon one side of Kent-street, at the boundary between Bermondsey parish and St. George's parish, there is an open ditch there which runs a considerable way as a boundary between the two parishes, and on one side of Kent-street, in our own parish, there are several streets, and almost every street had the typhus fever, and the inhabitants had to go away from it.

642. Did that arise from that ditch not being covered over?—Yes.

643. That is in another part?—Yes, that is toward the Kent-road.

644. Is the cleansing and cleaning out those places, and the draining and bringing an under-ground communication to each house, neglected in that district?—Yes, I have no doubt it is; I had occasion, a few years back, to call the attention of the guardians to the state of it, in consequence of the cholera; we formed

formed a committee, and got our officers to give them notice that they must keep the houses in a better condition, and have them whitewashed, and keep their places in a better condition.

645. Was any system of drainage carried out, so as to bring the drains up to every house?—No, there has been nothing of that kind since.

646. Is it still in a very neglected state?—Yes, there has been nothing done since; there have been to the new houses, but in the general part it is not.

647. It is still neglected?—Yes.

648. And the cause of fever to the inhabitants?—I have no doubt it is so.

649. With respect to the conveniences, the privies, and so on, are they well regulated; are they sufficient, or are they kept clean or cleansed at proper times, or are they, on the contrary, neglected?—They are all neglected; there are so many people in one house using the same convenience, that there is often not a cover at all, and it is very dangerous to go to it.

650. And injurious to health?—Yes.

651. Is there any efficient system of inspection as to drainage, and as to cleansing the cesspools and cleansing those places in which dirt and refuse are thrown, in those close courts and places inhabited by the working classes; is there any system of inspection carried out?—In our parish we have different local Acts of Parliament for cleansing and lighting and scavengering; I am one of the commissioners belonging to one part, and we contract once a year with the master scavenger to take care to clean the whole of the bye places and the main streets; that is, once or twice a week it is done; I believe we have the power to insist upon these things, but I am not sure it is carried to the extent that it ought to be.

652. Is there any effectual system of inspection now, to see that it is done?—It is not to that extent I wish to see it.

653. With regard to these close courts and alleys, is there any system of inspection as regards house cleansing?—I know there is not.

654. Would it not be very much an improvement to the health of the district, and particularly the humbler classes, if such a system of inspection and cleansing was carried out?—Very essential.

655. Does not there want an improvement in the system of drainage?—I believe in the open drainage there does; but we have a very excellent sewer in our parish.

656. Does it go up every main street?—Yes; and there is a very good communication from every bye street.

657. Are they covered communications or open?—By an open gutter, very often.

658. Is not that very injurious?—Yes, most injurious.

659. Ought it not to be covered?—It ought to be.

660. Is small-pox prevalent in those districts among the children?—It is frequently, but we have not many cases at present.

661. Does not a neglect of cleanliness and decency have a tendency to increase the virulence of the disorder?—If there is any epidemic, no doubt the want of cleanliness will increase it, and produce a disposition in the constitution to receive the poison.

662. Are there many children in this district?—Yes.

663. Are there schools provided for them?—We have many schools in the Bow-road.

664. I am speaking of the Mint?—That is not far from the Mint.

665. Do you find there are schools sufficient for them?—Yes; but the parents neglect to send them.

666. Do the children go?—Many do, and many do not.

667. Mr. *Ingham.*] Are there play-grounds attached to the schools?—There are no play-grounds to any great extent; there are small yards.

668. Mr. *Wilson Patten.*] Do you know anything of the quantity of school-room there is in your district, or the number of schools for the labouring classes?—No, I do not know the number of small schools, but we have a national school and a parochial school in the Borough-road; and it is in contemplation, I know, to enlarge the national school in the Borough-road to a very considerable extent; there is now a committee sitting, and they are now examining different designs sent in, so that the school in the Borough-road will be a very large one indeed.

Mr. *Edward Evans.*

27 March 1840.

669. Do you know what the space around that school will be?—At present it is a very small yard.

670. Will it be enlarged?—I believe it will; and with regard to our own neighbourhood, it will be a very great advantage to it.

671. Have you found in your observations, that the children who frequent the schools are the most healthy children in the district?—Yes; by their attention at school, and going backwards and forwards to school, and having their breakfasts and dinners regularly, it engenders good health and cleanliness also.

672. Mr. *Greene.*] How is the water supplied to the houses in the Mint; are they not very poor houses?—Yes, they are very dilapidated houses, and ought to be condemned.

673. Have they water laid on to each separate house?—No; they are congregated together, and there is a common pipe or cock for several houses in the back yards; you find several running with their pails to the same place to get water.

674. Do the landlords of the several houses contribute for the water?—The houses are farmed out, and the landlord pays so much for the water, and they have all common access to the water place.

675. You have spoken of an open ditch in the neighbourhood of Kent-street; how does that communicate with the common sewer?—It runs between the two parishes, and empties itself into another ditch, that empties itself into the Thames.

676. Are you aware how far it is from that ditch to the common sewer?—I believe it is about half a quarter of a mile.

677. The common sewer is much below the level of that ditch?—Yes, many feet.

678. Would it be a matter of perfect ease to empty it entirely into the sewers?—Yes; there is an open space in Kent-street, where it could be easily done.

679. To the infinite benefit of the inhabitants of the neighbourhood?—Yes; and I think those belonging to the sewers ought to be careful as to the particular gratings, where there is often an accumulation; that causes a considerable effluvium that is injurious to health; I want the parish to admit a quantity of water in where there is an accumulation of stagnant water under the grating.

680. There being no water in the stink-trap?—No.

Mr. *Matthew French Wagstaffe*, called in; and Examined.

Mr. *M. F. Wagstaffe.*

681. *Chairman.*] I BELIEVE it is the Lambeth district you are acquainted with?—Yes.

682. You have made a report to the Poor-Law Commissioners upon the sanitary state of the poorer classes?—Yes, in 1838.

683. You are a surgeon?—Yes, I am.

684. Residing in Walcot-place West, Lambeth?—Yes.

685. I observe in page 16, of the Report I have in my hand, a letter of yours, in which you state you had addressed yourself to the board of guardians of Lambeth, the 18th September 1837, on the subject of the prevalence of fever in many parts of your district; the periodical recurrence of its almost continued existence, chiefly among the labouring classes; and you told them that, in your opinion, it arose from want of proper drainage, and suggested the propriety of constructing a sewer in East-street, Lambeth-walk, and the following streets leading into it, namely, New-street, Saunders-street, John-street (east and west); besides these, you recommended that Frances-court, Fountain-court, both in Lambeth-walk, China-walk, China-place, be frequently cleansed and limewashed, and that all the houses in which fever had been, or was at that time raging, should be likewise limewashed; that is from your letter, is it not?—Yes, it is.

686. In consequence of that, you stated that the board of guardians gave prompt attention to the whole of your suggestions, as regarded the forming of a sewer in East-street; that is the sewer which was pointed out; has that sewer been made, and have those improvements been made which you suggested?—I believe they have not.

687. In your opinion, were they requisite for the health of the poorer classes in that district?—Yes.

688. Are

Mr. *M. F. Wagstaffe.*

27 March 1840.

688. Are you aware, from your medical knowledge, that fever was caused in that neighbourhood from the neglect of the drainage and sewerage?—I cannot say that.

689. If not generated, it was increased by it?—Yes.

690. Was the neglect of the sewerage and drainage a predisposing cause of the want of health among those working classes?—Well, I should think so.

691. Subsequently you state, in another letter, alluding to the former one, "East-street, New-street, Saunders-street, John-street, Fountain-court, and Frances-court, Lambeth-walk, are the worst places; the primary cause of this infection," speaking with regard to fever, "I believe to be the malaria or effluvia arising from the state of the drains or stagnant filth; the heat of the sun, acting upon the mud, sends forth this kind of malaria, which impregnating the air, is the first cause of fever, and consequently the cause of a great additional burthen upon the parish, by the increased number of paupers rendered wholly incapable of work, and throwing them and their families entirely upon the parish." That is the account you gave; do you still remain of that opinion?—Yes, I do.

692. Then you recommend, as a remedy, that the drains be cleaned, and no filth allowed in the gutters; and should there be any cow-yards where pigs are kept, night-soil emptied, &c., that these be also looked to; has that recommendation been attended to?—I should think only in part.

693. Is the district with which you are acquainted still very much in want of such sanitary precautions?—It is.

694. Is this district a populous district?—Very much so.

695. Inhabited principally by the working classes?—Very much. We return from 5,000 to 6,000 patients annually; consequently it must be a very densely populated place.

696. Are those persons, from their habits, many of them not having the best food, and so on, susceptible of fever from those causes, and being in the immediate vicinity of neglected drains?—Much more so than others.

697. Is it not more particularly necessary that in the vicinity of their dwellings cleanliness and drainage should be observed?—Yes; and the houses should be looked to, and many of them ought to remain uninhabited for some considerable time, so as to do away with the probability of infection.

698. You mean houses infected with fever ought to be shut up some time before other persons get into them?—Yes; not only shut up, but cleansed and limewashed.

699. Is there any such power now in existence?—No; it is optional with the landlords. I have called their attention to it, and sometimes they have done it.

700. Do you not think some means of enforcing the cleansing of houses where the poorer classes reside, so that the houses infected with fever should not be immediately again inhabited, would be attended with advantage?—Yes, I do. In some cases the privies are in the cellars, as Windmill-court, Harper's-court, Fore-street.

701. Is the state of the privies in the neighbourhood neglected?—I can hardly say that; in some instances they are.

702. How is it with respect to cesspools and receptacles for wet and filth, and so on?—They are very much better attended to than formerly.

703. In that respect improvment has taken place?—Yet I do not know that there is less decomposed vegetable matter lying about; I notice it in many places.

704. Are there underground drains, communicating with the common sewer?—No.

705. Is not that necessary for health?—Yes.

706. Are there any means of enforcing it?—I believe it rests with the Commisioners of Sewers.

707. Do you know that they have any power of enforcing it?—I wrote to them, and you will find my letter, and the answer, in the report you have mentioned.

708. Mr. *Tufnell.*] You say that has been an improvement?—More attention has been paid.

709. Is it in consequence of the improved habits of the people, or the regulations enforced?—The regulations enforced.

710. What regulations?—I may be incorrect in saying regulations, but greater attention on the part of those persons having the power of enforcing the scavengers and street-keepers to cleanse the streets more frequently.

 711. *Chairman.*]

Mr. *M. F. Wagstaffe.*

27 March 1840.

711. *Chairman.*] Is the drainage still in a defective state?—Yes.

712. The cleansing of the close and small courts, is that still defective?—Yes.

713. Requiring attention?—Yes.

714. Do you not think that some kind of authority for visiting, for the purpose of inspection, populous districts of this nature, so as to enforce sanitary regulations for the good of the inhabitants, would be essential?—Decidedly.

715. According to the common saying, "What is everybody's business is nobody's," it is not done at present?—I believe it is not; I think in the answer to the letter I have just mentioned, it was stated there was very little power, if any, in the Commissioners.

716. Mr. *Cowper.*] Do you know the authority of the surveyor of the highways?—No; I suppose it is to look to such things; there was a person who stated himself to be the secretary.

717. *Chairman.*] The letter you allude to is from Thomas Roffey to the board of guardians?—Yes; in which he says, "The courts called Fountain and Frances-courts are not under their jurisdiction."

718. That is the part you alluded to?—The assistant surveyor, Mr. Mundy, interested himself while he was in office; he called upon me, and promised that a sewer should be made in East-street, and some of the adjoining streets; but it was not done, nor has it been done since he vacated the office.

719. How long ago was that?—In 1838.

720. Mr. *Greene.*] Your letter is the 25th of September 1837?—Yes.

721. *Chairman.*] Since that communication, which was made to you in 1837, down to this time, this sewer, so essential to the health of this district, in your opinion, has not been made?—A sewer has been made in Lambeth-walk, but none down the contiguous streets.

722. But those sewers into those populous spots have not been made?—Lambeth-walk is a very populous place, and these streets run at right angles.

723. There are no sewers made into those streets that are at right angles to Lambeth-walk?—No.

724. They are without any sewers or underground draining?—Yes.

725. Mr. *Cowper.*] How often are the gutters cleaned?—I do not know; I have often seen the streets swept.

726. Mr. *Tufnell.*] Is there any difference in the health of the inhabitants in consequence of the sewer made in Lambeth-walk?—I cannot say that it is owing to the sewer in Lambeth-walk. We returned 800 cases of fever in 1838, and we have had fewer cases of fever since; but I was unable to look through the books, having been out professionally during the night.

727. When was the sewer made?—Soon after that time.

728. *Chairman.*] That has arisen from the sewer having been made?—I cannot say that.

729. Mr. *Ingham.*] Do you find any difference in the liability to disease among those inhabitants who live close to the water side; are they more liable than those who live further inland?—In some places they are, such as intermittant fever. There are some very filthy places near the river, so contiguous to it that they can get water almost whenever they please. There is an immense quantity of mud and filth even now, right away from Westminster Bridge to Vauxhall Bridge, which includes this part; filth of all sorts is thrown over into the mud—vegetables, &c.; and vegetable matter sooner decomposes and becomes more infectious than animal matter.

730. Are those accumulations of mud ever removed by a dredging machine?—I never see any, except at the boat-builder's; and that is for their convenience.

731. Do they continue accumulating till they get above the level of the water, and then turn into land?—No, they remain in that state.

732. *Chairman.*] Does not the flowing of the tide up and down prevent the accumulation?—No.

733. Mr. *Ingham.*] How long have you lived there?—Ten years.

734. You were not there before the taking down the old London Bridge?—No.

735. Do you know whether there is any difference in the scouring effect of the tide since that bridge was removed?—I cannot say; the tide often runs so high that this part of Fore-street, and right away to Vauxhall Bridge, is frequently inundated.

736. What is the chief occupation of the people in this neighbourhood?—Fishermen.

737. Is there anything in their diet that tends to produce disease?—Their diet is of a very peculiar kind; many of them drinking large quantities of spirits, and eating little else than salted fish and potatoes; haddock, herrings, and such sort of fish.

738. Mr. *Cowper.*] Do they appear to suffer from their diet?—Yes, they do.

739. Mr. *Ingham.*] Is cocoa used as an article of diet?—No, I cannot get them to use it; they prefer tea.

740. Mr. *Tufnell.*] In what part of the year do fevers more particularly exist?—I think rather more in the hot season; but we do not have more than three months summer weather in this climate, and we have fever the whole of the year.

741. But it is most prevalent in summer time?—Yes.

742. It is not generated by the want of fuel in the winter?—I often find numbers huddled together over small fires, and very little to cover them, and taking very little food; and the inadequate quantity of food produces an inefficient circulation of warmth, and the want of clothing weaken the powers of the system.

743. It is not the want of warmth, added to the inclemency of the season?—It predisposes them to it, and consequently predisposes them to any endemic or epidemic that may be floating about.

744. Mr. *Ponsonby.*] Does their peculiar diet arise from poverty, or their preferring it?—Perhaps both.

745. Are they very poor?—Yes.

746. Do they buy the fish you speak of at cook-shops, or do they dress it at home?—They dress it at home; they catch it and dress it; the herrings they purchase; I see the fishermen bringing up the fish in their little boats.

747. Mr. *Greene.*] Do you find any difference in the houses situated at the mouths of sewers?—I have not taken particular notice of that; I do not know that I could give an answer to it; I think their diet has much to do with their health.

748. Mr. *Ingham.*] Generally, with the exception of fish, do they get their dinners at the cook-shops or cook them at home?—Often at cook-shops; there are a great number of cook-shops in the neighbourhood, and they purchase their articles in the smallest quantities possible.

749. *Chairman.*] Do the working classes drink a great quantity of ardent spirits in that neighbourhood?—Yes; there is not a street without one or two gin-shops or palaces.

750. Is that injurious to them?—Yes.

751. Anything that would wean them from that habit would be beneficial to their health?—Yes.

752. Within any little distance from you, is there any open space where the people may walk with their wives and children on the Sunday and enjoy the air?—Yes; the whole of the Bishop's-walk, between the old church and Westminster Bridge; that is one place, and there are many others.

753. How far is Kennington-common from the place you have been speaking of?—Not more than 10 or 15 minutes walk.

754. That is a very good reserved place?—Yes.

755. There is a footpath across the middle of it?—Yes.

756. Is it, generally speaking, pretty dry, and kept in good order?—Moderately so.

757. Would it not be desirable to have a little improvement there, so that people might have at all times a dry walk across it?—Yes.

758. And round it?—Yes; it is often very wet.

759. There is a right of common upon it at certain seasons of the year?—There is; and that portion upon which the church has been built, I believe, was originally a part of the common-right.

760. Mr. *Tufnell.*] Has there been any great increase of late years among the lower order of inhabitants in streets of an inferior description?—Yes, and built upon marshy land, which is decidedly wrong, without any drainage at all; there are no drains or sewers made in many parts.

761. *Chairman.*] What district do you speak of?—About Vauxhall, adjoining Vauxhall-gardens; no drains running into Tyer's-street, New-street, Vauxhall-street, from the back streets. Several hundred houses are built upon this marshy land.

Mr. *M. F. Wagstaffe.*

27 March 1840.

762. Mr. *Tufnell.*] Was any representation made by the local authorities to the Commissioners of Sewers?—I do not know.

763. It is not your duty?—No.

764. Mr. *Ingham.*] Do you know whether these streets were built by speculative builders, or by building societies?—Speculative builders; and so it is in the Waterloo district, Granby-street, and that neighbourhood.

765. Are there any building societies in your parish enrolled under the Benefit Society Act?—Not that I know.

766. *Chairman.*] Are there any drains in the new streets that have been built in the district lately?—No.

767. Would it not be a great improvement to the health of the inhabitants if there was such a system of drainage?—Yes.

768. And it is also necessary for the purposes of cleanliness, as well as health?—Yes; and it is the same in the New-cut, in White Horse-street, running into Blackfriar's-road.

769. Is that inhabited by the lower classes?—Yes.

770. Are there any other places of a similar kind?—The whole of Walworth Common towards the bridge leading to Peckham. The ditch Mr. Evans spoke of runs down Kent-street, back of the Kent-road, through Bermondsey, and so on into the River.

771. Is that an open sewer?—Yes; it is a tide ditch, but often containing much filth.

772. Is there any other district which is so neglected?—Yes, the whole of that part called Walworth Common.

773. Is that neighbourhood occupied by the working classes?—Yes, entirely.

774. Are there many of them there?—There are 2,000 or 3,000 houses.

775. Is the sewerage and drainage there much neglected?—Yes.

776. Are the buildings there still increasing?—Yes; and what is very singular, there are very few houses to let.

777. But no methods are taken for draining these new houses?—Very few of them.

778. There are in some?—Yes: in Walcot-square, where there are 300 houses erected, there is a system of drainage.

779. Are they of an inferior description?—No, they are rather of a better description of house; they have a sewer through the whole of them.

780. You are not aware of any mode of enforcing any regulation, for the drainage and sewerage, and ventilation in those districts?—No.

781. Would not some such power of due regulation for the drainage and sewerage, and taking care that the houses are built in a proper mode, be highly beneficial to the working classes?—Yes, similar to the district surveyor; he has authority over the building of houses.

782. Are you aware that his authority only extends to party-walls, and overhanging chimnies?—I was not.

783. Are you aware that he has any other power?—He has none over the sewers.

784. Has he any authority as to houses being placed at a distance from each other?—No, but the houses must be built, according to first, second, or third-rate, and with good party-walls.

785. That is as a preventative against the spreading of fire?—Yes.

786. Mr. *Tufnell.*] Is there good ventilation provided in the new houses you have been speaking of?—I believe they are built upon a much better principle.

787. Are they well supplied with water?—Yes; indeed there is a reason for it; there is a contention between two companies; they are both supplying water and bringing their pipes in all directions, the Vauxhall and South Lambeth Companies. In the district I first mentioned, the Lambeth district, and in Bermondsey and in the Borough, I see they are well supplied with water.

788. The class of buildings which are improved as to drainage, are the better classes of houses?—Yes.

789. The great objection, in the district you have spoken of, is the want of cleanliness in drainage?—Yes; and individual cleanliness also.

790. If there is a good system of drainage, do you think it will induce habits of cleanliness?—I cannot say; it might; it could not do any harm.

Mr. *Samuel Miller*, called in; and Examined.

791. ARE you relieving officer?—Yes, of the West London North District.

792. What locality?—The parish of St. Sepulchre, St. Bartholomew the Great, and St. Bartholomew the Less; it surrounds Smithfield.

793. Is that a densely-peopled district?—Yes, of the lower class of Irish.

794. A great number of the labouring classes?—Yes; perhaps I might just add, that the parish of St. Sepulchre consists of 8,000 souls, but only 650 rate-payers.

795. Be kind enough to describe to us the state of the poorer districts within the locality you are acquainted with, with regard to the drainage, sewerage and cleansing the courts, cesspools, and other receptacles of refuse in and near the houses of the poor?—The parish of St. Sepulchre is very well cleansed and looked after, but there are alleys branching off from Saffron-hill, and what was formerly called Chick-lane, now West-street: there are alleys and courts branching all the way through to Snow-hill, and in spite of all they can do the offal is still carried out into the streets. They possess the advantage of an excellent and ample supply of water, but in spite of everything that can be done, the nature of the population and the narrowness of these places will always accumulate a great portion of filth.

796. What is the drainage from the main street to each of those houses; are there under-ground drains?—Yes, there is. The parish of St. Bartholomew the Great is the very reverse: there is the whole of New-street, of 30 houses, and the whole of Middle-street, leading from Cloth-fair, consisting of 30 houses, where there is no drainage at all, and in some places the filth has been allowed to accumulate, so much that even this morning I saw an overflow of it even in the passages, the effluvium from which is insufferable; in fact, it is so dreadful that in going to visit the sick we must wait some time before we can get ourselves into a situation to go into the room at all.

797. What is the condition of the cesspools and the privies?—They are in a very bad state indeed: they have got into a system of getting water thrown into the cesspools, and pumping it out into the streets; there are no sewers at all, or any other mode of getting rid of it, but by getting the nightmen to take it away; but every room being occupied by a family, the poor people will not get it done, and the landlords do not do it till the authorities compel them.

798. Does this same system of neglect extend itself to any other courts or districts?—No, it does not go over much of Cloth-fair.

799. Are there, in the particular district you spoke of, where the neglect is so great, fevers and disorders arising as the consequence of it?—Yes, very much; it was only a fortnight ago I was compelled to take one of the magistrates to take the deposition of three poor people who were very ill indeed; one was a case of fever, and the other very bad, arising from filth: one was a young man who has since died.

800. Does that state of disease produce much expense to the parish?—It does produce a proportion of the expense: we are compelled to send them to the Fever Hospital. We sent from Back Ball-alley 22 to the Fever Hospital last year.

801. Do those diseases arise from want of cleanliness and want of drainage?—Yes, no doubt; this Back Ball-alley was cleansed throughout, but it has broken out again; in fact, there is no air gets to it at all: it is a narrow space, not above a yard wide, and every room is occupied by a poor family, consisting of four, five, or six.

802. There is neither draining, ventilation, or cleanliness to promote the health of the inhabitants?—No.

803. The consequence is fever and disease?—Yes.

804. Do your observations extend themselves to any other district thereabout?—No, I only know these particular places with respect to drainage. With respect to population, there is a very dense population among the courts and alleys, and lodging-houses adjoining: we have 10 lodging-houses, where they make up from 40 to 60 beds a night.

805. What is the state of them?—They are kept pretty clean: when going backwards and forwards we notice it; the parties are rate-payers who hold them, and they keep them clean.

806. Will you mention any other districts requiring draining and sewerage, and

Mr. S. Miller.

7 March 1840.

and cleansing?—The greater part of St. Bartholomew's requires cleansing; and then there are other parts I have mentioned that have no drains, but in the other parts I have mentioned it is impossible to cure it, except by pulling them down. The property belongs to Lord Kensington, and they are occupied by the lower class of Irish.

807. Would it very much add to the health of the district if they were pulled down, and an opening made?—Yes; poor as I am I would subscribe something myself to have them pulled down, from the danger I run in visiting the people there: there being a family in each room, they block up every avenue for the air, and the stench arising from the bottom of the house it is impossible to describe.

808. Would not regulations to insure cleanliness there be of the highest importance?—Yes; but the parish is divided into factions, and it requires a superior interference, and it must be done, or the state of that place alone will affect the health of the metropolis.

809. Mr. *Tufnell.*] Do you mean from the number of people inhabiting the houses?—No, from the houses themselves, and the want of drainage; the houses are very ancient and tumbling down, and the parties interested will not alter them as long as they can get a tenant to occupy each room. If a house consist of four rooms, they get 16*s.* a week for a house not worth 20*l.*

810. Is the state of the health of the neighbourhood better or worse than it was a few years ago?—Worse, decidedly.

811. Have you any returns to that effect?—No, it is only from my observation; if any party is sick, I go and visit the case, and give an order for the doctor; but I am satisfied that the disease has increased; we sent 22 cases to the Fever Hospital from one place alone.

812. *Chairman.*] You think that fever has increased?—Yes, very much.

813. You think that owing in a great measure to the existence of these places?—Yes, because when a place has been cleansed, the disease has shown itself again.

814. Mr. *Tufnell.*] Has the mortality increased in the parish?—I do not think it has; the people are considerably more temperate than they used to be, but the lower class of Irish generate diseases that the English do not; they eat a kind of food that the English do not; they eat the heads of rusty old pork, and salt-fish; I think they eat things that engender disease; but the habits of the people are certainly more sober in the last two years.

815. There has been a regulation enforced lately about shutting up the public houses on Sundays till after church time; is that beneficial in your opinion to the labouring classes?—Yes, it is a very great benefit to them; in my opinion smoking induces drinking; the men light their pipes in the morning, and go to the public-houses to get drink, and get stupified in the morning, and all the rest of the day they are not fit for anything; I wish there was a tax, to put an end to smoking.

816. Supposing in a neglected place, like one of these courts, there has been a family in a room which has had the fever, and the room has been contaminated by it, is there any power by which you can prevent any other family coming in, till it is cleansed, or compel the landlord to whitewash the house?—I am not aware that there is any such power.

817. Would not some such power be a great benefit to the health of the neighbourhood?—Yes, there wants, as I said before, some superior interference; the interests of individuals prevent any alteration taking place.

818. Do the landlords of those poorer dwellings derive a very considerable rent from them?—Yes; the houses are not worth above 40*l.* or 50*l.*; they buy them, and let them for 4*s.* a week; they farm them out; I know a man who is making a great deal of money by houses of this sort.

819. Do the people pay their rent beforehand generally?—No; there is one person on the spot who goes round every Saturday night or Monday morning, and collects the rent from house to house, and he generally lives rent-free.

820. Who pays the poor-rates for those houses?—They are farmed at so much a house, full or empty, but they are considerably under-assessed.

821. The landlord pays the rate?—Yes.

822. Is that under the local Act?—No, but by agreement with the parish officers.

823. Mr. *Baines.*] He pays by a composition, not by the value?—Yes, so much

much per house, whether full or empty; they are productive by being let out; the landlord gets 4 *s.* a week.

824. *Chairman.*] He loses sometimes by a slippery tenant?—Yes, and having the repairs to do.

825. Mr. *Baines.*] Is this thought a desirable property?—Not to those who can lay out their money well, but only to low brokers who can get their money where others cannot.

826. *Chairman.*] Do they make their interest upon their money?—No doubt of it.

827. Mr. *Walker.*] What is the amount of abatement made by the parish officers generally?—That would be according to the necessity of the case; I should think they do not pay above half as much as the other houses upon the average.

828. Mr. *Ingham.*] You say that the Irish workman lives upon coarser food than the English?—Yes.

829. Is that from receiving a less amount of wages, or does it arise from his spending his money otherwise?—I think from receiving less wages, and from their previous habits of eating coarser food; I think the English labourers are brought up with more cleanly habits. The peasantry of England were tolerably well fed, and had wholesome food, and you could not get them to partake of bad food; the Irish partake of salted or pickled fish, and large old pigs' heads, and very rusty and bad bacon, and things of that kind, and a great quantity of salt fish; all through the neighbourhood of Saffron-hill you would see fish lying about that you would not think people would eat.

830. With the same wages, you think the English labourers get better food?—I think the Irish labourers have not the same wages; they get a job now and then, and then they are out of work the rest of the week, probably.

831. It is from the habit of being content with coarser food that the Irish live as they do?—Yes, and they are more improvident.

832. Mr. *Ponsonby.*] Are the Irish less temperate than the English?—Yes, and they associate so much together, one man induces another to drink.

833. Have they any cookery for their dinners, or do they buy them generally dressed?—I think the poor generally cook their victuals, in London.

833*. At home?—Yes.

Mr. *Francis Moseley* called in; and Examined.

834. *Chairman.*] YOU live in Lincoln's-inn Fields?—Yes.

835. You have been in the medical profession?—Yes.

836. And have paid particular attention to the state of the poorer classes in the vicinity of London?—I have.

837. With reference more particularly to the state of their dwellings, and the state of the cleansing the drainage and sewerage near their dwellings?—I have directed especial attention to the points you name, as affecting the health and mortality of certain districts.

838. To what particular districts round London have you more especially attended?—The united parishes of Westminster.

839. St. John's and St. Margaret's?—Yes.

840. Be kind enough to mention to us any poorer districts of that neighbourhood, in which the labouring classes reside, which are neglected in point of sewerage, or cleansing, or ventilation?—I think that in these parishes, as in most of the parts of London where the poor reside, their abodes occupy a limited district, bounded by a certain number of better streets; I might say, the habitations of the labouring class of Westminster are bounded by Tothill-street on the north, Great Peter-street on the south, Stretton-ground on the west, and Great Smith-street on the east.

841. Within that district there is a considerable square or block, which is chiefly inhabited by the poorer classes?—There is.

842. Have you made yourself acquainted with that district?—Very much so.

843. Be kind enough to describe to us the state of their habitations in the points I have adverted to?—There are a great many of the abodes that are very old; and as regards sewers, I believe they are very defective. The inhabitants themselves are of a very low class indeed. The houses not only exceedingly close together, having but a narrow alley, court, or lane between them, but

Mr. *F. Moseley.*

27 March 1840.

each house is exceedingly closely inhabited; not only let into single rooms, but parts of these are re-let.

844. You say they are very deficient in sewerage; are there underground drains from the houses to the sewers, or are they deficient in that?—There is an open sewer, and I may add, a bone-boiler's, in the centre of this neighbourhood.

845. Where is that?—It extends from New Pye-street to Old Pye-street, running parallel up Duck-lane.

846. Is the effluvia from that in summer very noxious?—Particularly so.

847. Has that been the cause of fever?—Yes, it has to a considerable extent.

848. Are the open drains and the neglect of clearing away the filth and offal in this district notorious?—The scavengers neglect the courts and places where they should go particularly to.

849. In consequence of that negligence, and the effluvia arising from it, are there fevers generated in that district?—Yes, there always has been, and now are, in consequence.

850. Are many of the parts of the district you speak of neglected, in point of sewerage and drainage, and cleaning the privies, and so on?—Yes.

851. Are you cognizant that fevers and other disorders have arisen from it?—I have no doubt whatever, seeing such causes, that the result would inevitably be that fevers would increase.

852. Would an improved drainage and sewerage, and cleansing and clearing cesspools and receptacles of filth in that neighbourhood, be a material benefit to the health of the poorer classes?—Very great indeed.

853. Does the same general observation extend itself to any other district inhabited by the poorer classes in the neighbourhood of London?—There are many districts similarly situated on most points.

854. Just mention them incidentally, and state what districts there are similarly situated, and where the like evils prevail?—We may mention the same parish, more to the west, a number of alleys running from York-street and Castle-street in a similar state.

855. Inhabited chiefly by the working classes?—Yes.

856. Any other district?—More to the north, I might name the abodes of the working classes residing within the square having St. Martin's-lane to the west, Bedford-court to the east, New-street to the north, Chandos-street to the south. This mass of abodes is but intersected by a few courts and alleys, with but one exception; each house exceedingly closely inhabited, and where to obtain an access of air is peculiarly difficult; and here the sewerage and cleansing of the numerous receptacles of filth is very imperfect. Shall I mention further the boundaries of certain districts where sickness undoubtedly prevails from local causes?

857. If you please?—Long Acre on the north, Hart-street on the south, St. Martin's-lane on the west, and Bow-street on the east.

858. That is a district also in which the sewerage and cleansing has been neglected in the close courts?—Yes, it is particularly so; and from whence typhus is too frequently spread.

859. Is that a populous district, inhabited by the working classes of people?—Yes, the lowest class of people.

860. I believe a great want of cleanliness exists there?—Yes.

861. In that district, is the want of communication with the sewers one of the causes of disease?—Yes, that is the great evil.

862. Not the want of sewers in the main street, but communication with the sewers?—Yes, I believe that may be generally the case; there are opportunities, if they will avail themselves of it.

863. They are not enforced by any authority, either by means of regulation or inspection of any sort?—No.

864. Now, be kind enough to go on to any other populous districts in a similar state?—I will mention St. Giles; Holborn on the north, Parker-street on the south, Drury-lane on the west, Newton-street on the east.

865. Is that a district inhabited by the labouring classes almost exclusively?—Exclusively.

866. In which dwell many families in a house, one above another?—Yes.

867. Is it not more requisite, in a district like that, that the cleansing and drainage should be enforced, rather than any other?—Especially so, where the neighbourhood is similar to this; but where, undoubtedly, it will be found most defective, the population is very close, the houses are re-let, and even a room is re-let; there is often more than one family in a room in such neighbourhoods.

868. Under

868. Under those circumstances, it is more essential that the health should be attended to by public regulation?—Unquestionably.

869. Now go on to any other district.—St. George, St. Giles, and St. Martin's.

870. Those are parts of the several parishes?—Yes; to form a district several parishes met; Broad-street on the north, Tichfield-street on the south, Crown-street on the west, and King-street on the east.

871. That is also a neglected district, inhabited greatly by the working classes?—It is a neighbourhood where the underground drainage is not so deficient as in the previous; there are but few of the inhabitants to whom a good drainage is not available, though the stench from the majority of the privies, and the accumulation of filth in and about their houses, evince the greatest neglect of their health.

872. Do fevers and contagious disorders arise in that neighbourhood from the causes spoken of?—Yes, to a very great extent.

873. And when they do arise are worse in their symptoms?—Undoubtedly; for independent of the occurrence of fever, the inmates of those abodes are ever enfeebled, mentally and bodily, from the polluted atmosphere they are respiring.

874. You think that the physical energies of the people are in a great degree injured?—Yes, and their poverty increased, from the atmosphere they breathe rendering them incapable of work.

875. You think this arises in a great degree from the neglect of drainage and cleansing that we have spoken of?—Yes.

876. Turn to another district?—St. George's Rookery, Bainbridge-street on the north, Broad-street on the south, George-street on the east, High-street on the west; St. Andrew Holborn and Clerkenwell, Kirby-street on the west, Mutton-hill and Clerkenwell-green on the north, St. John's-lane on the east, Cowcross and Peter-street on the south.

877. In the district you have mentioned last, are there any common sewers?—Yes; there is the Fleet-ditch, which is in a very filthy state occasionally; it may be considered an open sewer.

878. Is that in the last district?—Yes.

879. Is it productive of fevers?—It is, to a very considerable extent; and, in this neighbourhood, there are a number of slaughter-houses, and so on.

880. Which are neglected, in your opinion?—Not in this district so much as in some.

881. You have mentioned this as a district which is neglected, and in which you think are wanted cleansing and improvement, and so on; is it a very poor district?—Very filthy; a complete hot-bed for fever; and I know of no spot where improvements are more called for.

882. Do you know that cases of fever have arisen, caused, as you imagine, by the want of cleansing and sewerage, and so on?—I have no doubt, considering the circumstances under which the people reside, fever must inevitably continue to occur until there is some amendment made.

883. Now go to another district?—Cripplegate and St. Luke's.

884. Part of the parishes of those two?—Yes; Golden-lane on the west, Bunhill-row on the east, Old-street Road on the north, Chiswell-street on the south.

885. That also is a populous district, inhabited chiefly by the working classes?—Yes; but in addition to the circumstances met with in the other districts, it has additional causes for polluting the air.

886. Will you mention them?—A number of burial grounds within a very short distance; indeed, in the midst of this dense population.

887. In your opinion the custom of burying in the midst of a densely-peopled district is injurious to the health of the persons living there?—Yes, particularly so.

888. Have you heard of cases of illness arising in the neighbourhood of a burying-ground?—Where the interments are so exceedingly numerous as in these grounds, I have, as they may be a considerable source of malaria.

889. Are there any other districts?—In the parishes of Moorgate, and Bishopsgate, bounded by Long-alley on the west, Half-moon alley on the south, Bishopsgate-street on the east, and Skinner-street on the north.

890. Is that a district inhabited chiefly by the working classes, or by various classes?—Chiefly by the poorest class of people.

Mr. *F. Moseley.*

27 March 1840.

891. Is that a district in which the want of drainage and sewerage and cleansing prevails?—Very much.

892. Are there many close courts and alleys there?—Yes, it consists entirely of them.

893. Is there a want of regulation for cleansing and draining there?—Yes, very great; the scavengers are seldom seen there at all; in fact, this spot they neglect to a very great extent.

894. Is there a want of drainage between the houses and the common sewers?—I should imagine there is no sewerage at all; it chiefly consists of courts, and the inhabitants have not applied to the Commissioners of Sewers for a communication.

895. From some cause it is deficient in drainage and cleansing?—Yes.

896. Is there a bad unhealthy smell in the lower part of the house injurious to the health?—Yes; although I have found by inquiries among this class they are not aware of the causes that produce the ill effect upon their health.

897. But you feel confident, from your medical knowledge, that it must have a very injurious effect indeed?—Yes, although imperceptible to the inhabitants.

898. Are there fevers prevailing in that district?—Yes, to a very great extent.

899. Arising from the causes you have mentioned?—Yes.

900. Mr. *Cowper.*] Do you know whether it is the duty of any public body to cleanse those places?—No, I am not aware of any.

901. *Chairman.*] Mention any other district?—I should say the Commercial part of London is the worst. I have inspected these parts; I have been in almost every alley, and know the state of the people, and where most attention is called for. On the Commercial side of London, down by a place called Rosemary-lane on the north, East Smithfield and Parson's-street on the south, Cartwright-street on the west, and Well-street on the east, inhabited principally by mariners.

902. Is that a very neglected neighbourhood in which fever prevails from neglect?—It is proverbial for cases of fever, as it is for its filth.

903. Mention any other district you are acquainted with?—On the Southwark side.

904. Are there many districts there neglected?—There are many causes besides the state of their habitations that claim attention; for instance, the different manufactories conducing to the vitiation of the atmosphere to a very great extent.

905. Have you paid attention to the state of Whitechapel and Bethnal-green?—I have not.

906. Is it very much neglected?—Yes, very much indeed.

907. There is a district towards Gray's-inn-lane, up towards the Small Pox Hospital; do you know that?—Yes; the state of the courts and the alleys, the drainage and the sewerage is very defective.

908. Are you aware of fever existing in that district, arising from neglect of this kind?—There are cases which we may venture to conclude arise from such causes.

909. Is there any other populous district in the vicinity of London, or in the outskirts, you can speak to as similarly situated?—I might mention Islington; so far out as that there are generally very great sources of sickness from similar causes; a number of courts running out of High-street in, perhaps, as unwholesome a state as any in the central part of London, though such places so far out of the centre of London would not be subject to the extent of evils as they would if they were more in the centre.

910. There is a great neglect of sewerage, and draining, and cleansing, there?—Yes.

911. And fevers arise more from that cause?—Yes.

912. Mr. *Tufnell.*] Do you consider that neighbourhood more unhealthy than those you have mentioned?—No; under similar circumstances they would be less liable to disease; and they are open to a current of air.

913. Mr. *Cowper.*] Does the nature of the soil produce any effect?—Yes, because of the want of drainage.

914. Mr. *Ponsonby.*] Is there a great deal of open ground near Islington?—Yes; that would prevent the same causes producing the same injurious effects.

915. Have you always found, in the neighbourhood of unenclosed grounds, the parties are more healthy?—Yes; because when I see a number of individuals occupying a limited space, which applies to a population like London, it must inevitably tend to pollute the atmosphere, let it be ever so carefully cleansed.

916. *Chairman.*] You have been good enough to mention a number of districts, in which you think great neglect in cleansing, and sewerage, and draining exists, and in which you think the health of the inhabitants so materially injured therefrom; can you state about the population of those different districts added together which you think are affected by this neglect?—I think that would be a matter which would surprise people at present unaware of the population of those unhealthy districts; for I found, from a close observation and much attention, in proportion as the poverty of the neighbourhood is, so is its close population.

917. That which is the most populous district is also the most neglected?—Yes.

918. Do you think you could make a tolerable calculation of the number in this district?—Yes, I could do so.

919. You could give it to the Committee at a future day?—Yes.

920. You believe a vast number inhabit those districts?—The population, I feel certain, in proportion to their area, is interesting.

921. And chiefly the working classes?—Yes.

922. Could you give the amount of the number of houses as well as of the population?—I cannot say; this district is a district I took merely from its circumstances; I do not know whether any documents could render me any aid in coming to a calculation in those particular districts; they are not limited to one parish, but in close courts and alleys in the lowest neighbourhoods.

923. Do you think, with respect to the sanitary provisions, as to those populous districts, whether they are old districts that have been neglected, or new ones arising in London and its vicinity, that some fresh regulations for the health of the inhabitants are necessary?—I consider the whole population of London unsafe while the evils of some neighbourhoods exist.

924. Mr. *Cowper.*] What do you mean by unsafe?—The health of all is rendered unsafe for want of some regulation of that sort.

925. Liability to infectious disorders and epidemics is increased?—Yes.

926. *Chairman.*] Do you think that the present regulations are inefficient with regard to enforcing drainage, cleanliness, and ventilation, and due sanitary precautions?—From the attention I have paid to this subject, I feel no hesitation in saying such is most assuredly the case.

927. Does your knowledge upon the subject that you have turned attention to, extend itself to any other large town except London?—No.

928. Mr. *Tufnell.*] Do you think that the condition of the poorer classes has been improving or deteriorating?—In proportion to the population, so in those districts are they becoming more thickly peopled.

929. With regard to their health and their comforts, has it been increasing or diminishing of late?—I consider that from their occupying such neighbourhoods as these, they are deprived of energy of mind and body, consequently their comforts must be diminishing.

930. Is disease more or less prevalent among them than it was?—It is limited to particular seasons, and whether an epidemic occurs or not; but I consider that fever is increasing most assuredly.

931. More than in proportion to the population?—I can hardly answer that without referring to some statistical information.

932. *Chairman.*] You refer particularly to those districts inhabited by the poorer classes that are in a great measure neglected?—Yes.

933. Do habits of intemperance prevail in the districts you have spoken of?—Not to the extent that it did formerly.

934. From that cause there ought to be an improvement?—Yes.

935. Mr. *Cowper.*] Have you observed the locality inhabited by successive generations exposed to the same want of cleanliness?—I do not consider that any of this pernicious effect is hereditary.

936. But where successive generations have been exposed to the same causes, it might act with redoubled force?—I do not think such evils could be propagated by birth.

Mr. *F. Moseley.*

27 March 1840.

937. You do not consider that the children of persons exposed to those evil influences would have a still weaker character than the children of other parents?—I do not think they would.

938. *Chairman.*] Do you not think that the children of parents who have been injured by exposure to malaria, and whose constitutions have been hurt thereby, that the children of such parents would be more likely than the children of parents in other situations to contract disease?—There must be actual disease set up in the constitution to affect the children by the parents.

939. Will not disease in the constitution of a child arise from disease in the constitution of the parent, so that the progeny of an unhealthy, dwindled parent will be an unhealthy and dwindled child?—I do not think so; the inhabitants of those places are suffering under disorder; that disorder may become a disease, and then it would become hereditary.

940. Mr. *Tufnell.*] Without any particular disease, supposing a family to live for three or four generations in the same confined court, the children will become of an inferior description?—I do not think so.

941. *Chairman.*] Do you not think that the children in the east of London are inferior in apparent robustness to children living in a healthy district?—If these children were removed to a spot more congenial to health, they would be healthy and robust.

942. You think that those circumstances act upon the child, and not upon the parents?—Yes, merely from the atmosphere it breathes.

943. It operates upon the child as it grows up?—Yes.

944. Mr. *Cowper.*] Is that an observation arising from experience?—Yes, and from theory.

945. Mr. *Ingham.*] You said you thought the health of London was affected by manufactories?—Yes.

946. What part is that?—I should say the Southwark side, particularly.

947. In what respect is the health injured by those manufactories?—By their tending to contaminate the atmosphere; especially by a trade called bone-boilers, and manure manufactories.

948. *Chairman.*] Do you mean the occupation, or the vicinity of the spot?—The vicinity of the spot to bone-boilers and manure manufacturers.

949. You think that those manufactories should be removed for the sake of the health of the inhabitants?—The manufactoring of the manure, which consists in exposing heaps of animal matter to putrefaction, after the process of boiling, most assuredly might be carried to the country.

950. Mr. *Ingham.*] What is a bone-boiler?—I did not know there was such a trade before.

951. Mr. *Ponsonby.*] Are you aware there is much disease in such neighbourhoods?—I have been among the inhabitants surrounding those places, and it is to a great extent; and is producing a continual injurious effect to a considerable distance.

952. Mr. *Tufnell.*] Is there a general disposition in the lower class to avail themselves of any facilities that may be offered for improvement in the way of drainage?—I have found in many instances they do not take those means to render the sewerage available.

953. *Chairman.*] Their disposition to avail themselves of any advantage offered to them, is in proportion to the intelligence and instruction they have received?—Yes.

954. In proportion as they are instructed and have become intelligent, in that proportion you enable them to make use of those means?—Precisely so; I found it the most difficult matter to convince the occupiers of these neighbourhoods of the injury it is doing them; they are ill, but they do not know why; the especial tendency of a contaminated atmosphere is to deaden the mental and bodily energies.

955. Any kind of instruction, or education, or intelligence that was conveyed to them, would facilitate the means of improving their condition, even upon those physical points of our inquiry?—Very materially.

Lunæ, 30° die Martii, 1840.

MEMBERS PRESENT.

Mr. Brotherton.	Mr. J. Ponsonby.
Mr. Cowper.	Mr. Slaney.
Mr. Greene.	Mr. Tufnell.
Mr. Ingham.	Sir Harry Verney.
Mr. Wilson Patten.	Mr. Richard Walker.

R. A. SLANEY, Esq. IN THE CHAIR.

Mr. *Francis Moseley,* called in; and further Examined.

Mr. *F. Moseley.*

30 March 1840.

956. *Chairman.*] HAVE you been able to ascertain the population of the districts which you spoke of on Friday last, as being in a bad state, and neglected as to drainage and ventilation?—In part I have done so, but it is not yet complete.

[*The Witness was directed to furnish the information referred to.*]

957. I will now ask you a few questions relating to a district inhabited principally by sailors on their return from their voyages, where they reside till they sail again on their outward voyages, and which district, I believe, comprises certain portions of St. George's in the East; are you acquainted with it?—I am.

958. You are acquainted with the district in which sailors, and parties connected with nautical life, generally live?—I am.

959. What is the state of the district as to the drainage, cleansing, and ventilation, and the comfort of their dwellings, as affected by those matters?—I consider no part of London is more neglected as regards those points, sewerage, drainage, and cleansing altogether.

960. Have you visited those districts yourself?—Yes, all of them.

961. Be kind enough to mention to us the area of some of the districts, and whether it is a dense population?—I would mention a district in the parish of St. George's in the East, bounded by the Back-road to the east, Radcliffe-highway to the south, Bluegate-field to the west, and King David's Island on the east.

962. Between those points you have mentioned, is there a very considerable population?—Very considerable indeed.

963. Describe the state of the district with respect to the points you have adverted to?—The sewerage is most defective in those by-alleys, as I found on inspecting the maps of the Commissioners of Sewers.

964. Just describe some of the consequences of this inefficient sewerage?—Partial drainage of the surface, but the gutters and so on are in a very filthy state, showing, beside the want of drainage, that the scavenger is seldom there at all.

965. What is the state of the cesspools and the receptacles for filth there?—There are heaps of decomposing vegetable matter and offal thrown out of the buildings in those places, and the streets themselves are filthy beyond description.

966. Now, with regard to the cesspools, or privies, and so forth, can you tell us the state of those places; are they attended to or cleansed, or, on the contrary, are they neglected, and stench arising from them?—From what I am informed, they are generally emptied by carrying the contents away; but that is very considerably neglected, so as to occasion a great deal of very noxious effluvia constantly.

967. All those things, from what you have yourself observed, neglected in this

Mr. *F. Moseley.*

30 March 1840.

this district?—From what I have observed in this neighbourhood, they are neglected throughout the neighbourhood.

968. Having described one district, go on to mention another?—I should mention particularly King-street, and Green-bank.

969. Is that inhabited by a dense population, nautical people, and sailors?—It is.

970. What are the inhabitants?—It is principally the homes of sailors.

971. Now go to some other district similarly situated, thereabouts, if such there be?—I should say that different parishes will form one district, and I find it difficult to describe the parishes; they are in several parishes; Rosemary-lane on the north, East-smithfield on the south, Cartwright-street on the west, and Well-street on the east; now this, from my own observation, is without a doubt, with the exception of Whitechapel and Spitalfields, which I rather except from my description, because I consider it has been so amply adverted to already; but this is a neighbourhood most of all deficient in sewerage, (sewerage, I believe I may with certainty say there is none whatever,) drainage, and in also the general cleanliness of the inhabitants.

972. What class is that district inhabited by?—The same as the other district, sailors; the temporary home of our sailors.

973. And their families?—Yes, and their families.

974. Is it a densely-peopled district?—Particularly so.

975. And you consider, beyond a doubt, the points alluded to are particularly essential to their health, and that it is necessary they should be attended to?—No doubt.

976. Should you say that the neglect of them is injurious to them in a medical point of view?—Yes, particularly so, both as regards their general state, independent of fever, it produces a considerable degree of debility in their constitution being thus constantly in so noxious a vapour.

977. And with respect to fever, it has been described to us as being the cause of great evil in that neglected district?—Fever in those districts is more likely to occur, but, independent of fever, the inhabitants of such abodes lose mental and bodily energy.

978. And that affects them from their youth upwards, more or less?—Yes.

979. I need hardly ask you, but I suppose there is no doubt that it increases the virulence of any contagious disorder?—No doubt, and it is the great source of fevers of all kinds, and indeed of all diseases to which the human frame is subject.

980. Do you know that fevers prevail in this district?—Yes, I do, from the knowledge I have of those who are in immediate attendance upon these abodes.

981. In both of the districts?—Yes; I have seen the medical attendant of each of these districts.

982. Be good enough to turn to any other districts, though not so bad, which are affected by a degree of neglect in these particulars?—Shadwell, I will mention next.

983. What parish is that in?—It is a parish of itself.

984. Is it situated on the river?—Yes.

985. Is it inhabited by the class you have mentioned before?—It is.

986. The humbler class of sailors, and persons connected with shipping?—Yes.

987. Is that a densely-peopled district also?—Yes; equally so as the one I have mentioned.

988. Be kind enough to mention the state of that place with respect to sewerage, drainage and ventilation, and the observance of regulations that may affect the health of the working classes?—I should say in this district the evils are in some degree equal to those of the previous districts.

989. Will you mention any particular locality that you think neglected in those respects, or do you apply your observations generally?—It would apply generally in this instance; I am not aware of anything differing from the rest.

990. You speak from personal inspection?—Yes, of every one of them.

991. Do you happen to know the population of this district?—I do not.

992. Will

992. Will you go to any other district?—St. George's in the East and Wapping, London Dock on the north; Green-bank and King-street on the south: Bard-street and Broad-street on the west. This is an exceedingly filthy neighbourhood indeed; it is low; I saw no drainage at all; very low, and no drainage.

993. No efficient drainage?—No efficient drainage.

994. Are there a great number of narrow courts, and small close lanes, and so on, in this district?—The houses are but very slightly intersected by even these courts, close lanes, and so on; and it is a very ancient part also, where a considerable quantity of filth and vegetable matter, and everything likely to decompose, is laid in heaps about the place.

995. Is it a densely-peopled district?—The houses are not so high, and they are not so crowded as in many other districts.

996. It is inhabited by the poorer class of persons?—Yes; persons connected with the shipping and the docks.

997. Is the health of the people in this district, in your opinion as a medical man, affected by the circumstances by which they are surrounded?—I have no hesitation in saying it must be equally unhealthy with the others, from having visited the neighbourhood.

998. Will you turn to any other district you have not mentioned?—I would now consider the opposite side of the river, Rotherhithe.

999. You have yourself visited the district of Rotherhithe?—Yes.

1000. That is on the Surrey side of the river?—Yes.

1001. Describe to us first where it is?—It is a closely inhabited poor neighbourhood, directly on the opposite side of the river. This neighbourhood is particularly unhealthy, in consequence of a natural peculiarity in this district.

1002. That is from lying low, and the tide throwing back the water?—And having a very wide ditch, the mill-pond, where the tide rises and leaves an accumulation from the river of animal and vegetable matter upon its muddy banks; the tide entirely leaves the muddy banks, and during the heat of the sun of course it is a very fertile source of malaria to the vicinity, which is inhabited by the lowest class of people.

1003. Are there houses all along the banks?—Yes, they are very thickly inhabited.

1004. State generally the situation of the district with respect to cleansing and so forth?—In this district there are several evils to a minor extent than those I have mentioned before.

1005. Mention any that arise from the neglect of the sewerage, drainage, and cleansing?—Some of those ditches are sewers, and therefore they are in an open state; they serve as sewers in the parish; indeed, I think I may say there is but little else.

1006. Is it a populous part of the community?—Yes, quite populous.

1007. What is the state of the cleansing and draining in this district?—I am not able to advert to anything further than those open ditches.

1008. Are those open drains in the immediate vicinity of houses, in your opinion, the cause of ill health?—Quite so.

1009. Do you happen to know that fever does prevail in that neighbourhood?—Yes, I do for certain, having had conversation with the gentlemen who are attending them; I would advert in this district to Jacob's Island, which is surrounded by these ditches.

1010. Is it very thickly inhabited?—Yes.

1011. Does the state of this ditch affect the health of the people, in your opinion?—It is allowed by all in that neighbourhood to be the case.

1012. To be injurious to their health and strength?—Yes, and the source of fever.

1013. Is there any other district you can particularly speak to, with reference to the same points?—I would advert to Lambeth.

1014. Before you go to Lambeth, I would ask a question about these four districts which seem to be inhabited by people similar in their habits and manners; a great many consist of classes connected with the river and ships, sailors and sailors' wives, and so forth?—Yes, it is a temporary home; it is a home to the crew as the ships arrive, and on their departing they take their crew from these neighbourhoods.

1015. If, in consequence of the neglect you spoke of fever, should be generated and attack those nautical men, would it not be more likely to be communicated

Mr. *F. Moseley.*

30 March 1840.

nicated to the crews of ships going out from districts of this kind than if better regulations were attended to?—I consider that the state of these districts is a matter of great national importance to this the first commercial city in the world, from the very circumstance of their crew being taken from a neighbourhood so favourable to the generation of fever; it could scarcely be credited that a neighbourhood so important to London, the first commercial city in the world, could have been in such a state of neglect, where there are no sanitary regulations for such an important population, the population that man the ships of this country, who may be taken on board the ships apparently in good health, and after they have arrived on board, and out at sea, as I know from numerous instances, fever has broken out in the ship, and has been propagated, as is undoubtedly allowed by all authorities in these districts, and sanitary regulations might have subverted such evils.

1016. Now proceed to the district of Lambeth?—I adverted to Lambeth merely for one consideration, that was the existence of a very considerable source of sickness independent of sewerage, and independent of the habits of the people of that neighbourhood; there are numerous manufactories, but one, of one description in particular, that tends materially, in my idea, to the sickness in that neighbourhood, this is called a bone-boiler's and manure manufacturer's.

1017. Is that carried on in the centre of a populous district?—These I advert to are; there are several of them in the centre of a very poor population.

1018. And densely peopled?—Yes.

1019. It is an unhealthy quarter, is it?—Yes.

1020. You say you think these manufactories and bone-boilers, and so on, have very injurious effects upon the health of the neighbourhood?—To a considerable extent round the neighbourhood where they at present exist.

1021. Mr. *Brotherton.*] Have they been long established?—That I cannot say; my observation has been for about two years directed to them.

1022. *Chairman.*] What sanitary regulations do you consider would be effective to prevent the evils you think arise from this neglect?—The removal of the materials as soon as the manufacturing process is completed.

1023. Then, for the purpose of completing the manufacture, it does not appear to you necessary that the materials should remain upon the premises long enough to generate any evil to the inhabitants; is that the case?—Converting the putrid materials into manure should at least be carried on away from such a population.

1024. What is the manufactory; is it boiling bones for the purpose of making size?—They make several materials out of the bones.

1025. Then the bones, after they are boiled, are used for the purpose of manure?—Yes.

1026. Do the bones that are left after the boiling, when left in large heaps, engender a noxious smell and air, which is injurious to the inhabitants?—After the glue is extracted from the bones, the remainder is wheeled on to large heaps, where they are facilitated in decomposing by adding further materials, and it occupies a considerable space, as high as the surrounding houses; in that part of the process, it appears to me that some sanitary regulations might be of very considerable advantage to all the neighbourhood, and there are many of these.

1027. If, after the process of boiling takes place, the bones were moved away, so that the subsequent process of being worked up with other materials for the purpose of manure was carried on away from such a district, that would be what you contemplate?—Yes.

1028. With respect to the drainage and cleansing in this district, is that attended to or neglected generally?—I think that this district has an advantage perhaps over other districts; but that these evils are existing over an extensive district, amidst a poor population.

1029. Mr. *Tufnell.*] Are there more than one bone-boiler?—Yes; I could enumerate them; three in Lambeth, and four in Christchurch.

1030. Is there anything particular in that locality that makes it suitable to the establishment of a manufactory?—It seems to me that if they were in a better neighbourhood they would be indicted for the nuisance; but they are in the midst of a poor population, among whom I have been to ascertain the effects of this.

1031. *Chairman.*] You say it is a very injurious process?—Yes, it is shortening the days of hundreds.

1032. Mr. *Tufnell.*] It is the manure that makes it unwholesome, and not the bones?—The process of manufacturing does not consist in the putridity of them, but they make the manure by rapid decomposition, and this decomposition is throwing out foul air; a heap lies there, and they expedite the decomposition by throwing quick-lime over them.

1033. After the bones have undergone the process to get the gelatinous matter from them, are they in a pulpy state or a hard state?—Partly hard; they expedite the decomposition by the use of lime, and this consists in extricating foul air, sulphurated hydrogen gas, which is of all gases most pernicious to health.

1034. *Chairman.*] Are there any other districts where this practice prevails?—I have mentioned three in Lambeth, and four in Christchurch.

1035. You are not aware of any others?—They may exist a little way out of town, at Rotherhithe; but these I would not mention, because they are further off.

1036. Is there any other district you wish to speak to in a neglected state?—I think that most of the districts I have mentioned hitherto require more attention than the others; I think I have enumerated most of those that may be considered the most requiring attention.

1037. You do not advert to any others at present?—No.

1038. Have you any return from the registrar-general's report of the comparative mortality of any of those districts of which you have spoken?—Yes; I find on looking over the returns of the mortality of London generally, that the mortality bears invariably a proportion to the density of its population, and the filth of its neighbourhood, and hence the neighbourhood of our shipping is the most sickly part of London, for want of due sanitary regulations, hence becoming a matter of great national importance.

1039. You have got in your hand a return for some of those districts, I believe?—This is in reply to a question put on Friday as regards the population. I stated that in these blocks of courts and alleys which I delineated, that the population bears a greater proportion, independent of the closeness of the houses, to the inhabitants of each house than in the wider streets.

1040. They are packed closer?—Yes, the case applies to London; independent of the closeness of the houses, each individual house bears a greater proportion to the population than in the wider streets.

1041. Mr. *Ingham.*] Do you know the state of the lodging-houses frequented by seamen in the parish of Whitechapel, and other waterside parishes?—In a very neglected state; some of them are very extensive, so much so, that in Rosemary-lane there is sugar-baker's house taken for that purpose, for the reception of the very lowest class of people, and which is very imperfectly drained.

1042. Is it the case that several seamen lodge in the same room?—Yes, many such instances; and in that neighbourhood, I was assured for a certainty, that the floors of some of the rooms at night were completely covered with people.

1043. Do you know yourself at all the sum they pay per night for lodgings?—I cannot say exactly, but a mere trifle.

1044. Do you know the building in Dock-street, called the "Sailors' Home," for providing lodgings for seamen?—I do not know the building; I know there are in Dock-street a great many lodging-houses for seamen, where whitewashing and sanitary regulations are very much needed.

1045. You have not seen the Sailors' Home?—No.

1046. It is a large place, erected by public subscription, where the sailors, for a small sum, may occupy a wholesome apartment, and have the opportunity of cooking their own food?—I have heard of it, but have not visited it.

1047. You have stated in your evidence of the last day, that the health of the inhabitants of a particular part of the town was greatly affected, and that the want of personal cleanliness was injurious to health?—Undoubtedly.

1048. Have you any public baths in the districts you have alluded to?—Not any which I am aware of.

1049. Are you aware of an undertaking, commenced about two years ago, of having a large warm water-bath on the Surrey side of the water, for the use of mechanics and artisans, at a small sum of one halfpenny or a penny per day?—That would be a very essential part of sanitary regulations.

Mr. *F. Moseley.*

30 March 1840.

1050. Are there not, in this part of the town we have been speaking of, many large manufactories where large steam-engines and furnaces are required, so that great heat is employed in these manufactories?—Yes, there are in that neighbourhood, I believe, such as sugar-bakers, and a great many foundries, and other manufactories.

1051. Do you not think that it might be practicable, at no great expense, to procure reservoirs of hot water connected with those establishments, which might be made to supply public baths?—Yes, I think so. I think that baths in this neighbourhood may be generally established, with very trifling expense indeed.

1052. Are there any potteries or glass-houses in this neighbourhood you have spoken to?—I have not turned my attention to that.

1053. Mr. *Tufnell.*] You are not aware of the bathing establishment on the Surrey side of the water?—No, I am not.

1054. Mr. *Brotherton.*] Do you know of any reservoirs that would be suitable for baths?—I have no doubt of a supply of water.

1055. Do you know of any reservoirs attached to steam-engines in this neighbourhood?—No, I do not; but I am persuaded that baths can be established generally in these neighbourhoods with very little expense, and would form a very essential part of sanitary regulations.

1056. Mr. *Ingham.*] I understood you to say, with respect to those districts where the manufactories were that were injurious to health, that if similar manufactories had been in a district occupied by wealthy persons, that they would have been proceeded against?—Yes.

1057. The effect of those manufactories you believe to be injurious to health, and that they would support an indictment for a nuisance?—I think it very probable indeed.

1058. And that parties are deterred from proceeding, they being in narrow circumstances, and the expenses of the proceeding being heavy?—Exactly so.

1059. If there was some legal provision, by which a person proceeding against a nuisance, and establishing a nuisance, should be reimbursed his expenses, would that be essential in a neighbourhood like this?—I think that an authority that would take cognizance of such evils would put an end to these establishments.

1060. That authority being reimbursed his expenses out of the public funds?—Yes, no doubt.

[The Witness withdrew.

Dr. *Southwood Smith* delivered in a Paper on the Prevalence of Fever in the Metropolis during the year ended 25 March 1838.—*Vide* Appendix.

Jelinger C. Symons, Esq. called in; and Examined.

J. C. Symons, Esq.

1061. *Chairman.*] YOU were one of the Assistant Hand-Loom Weaver Commissioners?—I was.

1062. You are the author of one of the Reports on the South of Scotland, France, Belgium, Switzerland, and part of Austria?—Yes.

1063. And author of a work called "Arts and Artizans at Home and Abroad"?—Yes.

1064. In the course of your inquiries, have you had occasion to examine into the districts of Scotland, and particularly the condition of the people in Glasgow?—Yes, I have.

1065. Are you acquainted also with a little publication, called "Vital Statistics of Glasgow," by Dr. Cowan?—Yes, I am.

1066. Are you acquainted with him?—Yes, I am.

1067. Do you believe Dr. Cowan to be an eminent medical man there?—Yes; I know him to be very eminent in his profession.

1068. State what is the condition of the districts inhabited by the working and poorer classes in the town of Glasgow?—Exceedingly bad. I am not aware that I have ever seen a town in which the state of the working classes was worse, as regards the points of cleanliness and health.

1069. In what state is the drainage and sewerage of the densely-inhabited districts of Glasgow?—I am not competent to speak to the state of the drainage

age further than from the result of the general impression I felt on the subject, particularly in those parts which the working classes inhabit.

1070. Were they neglected?—Yes.

1071. Are those open gutters with filth and dirt and refuse from the houses lying in those courts and alleys?—Yes, to a certain extent.

1072. In one part of your report, page 51, which was written some time ago, you say, "Though in point of wages the cotton hand-loom weavers are thus decidedly inferior to every other class of operatives, yet in point of physical and social debasement, there exists a portion of the population in the district I have investigated very many degrees worse. I allude to the dense and motley community who inhabit the low districts of Glasgow, consisting chiefly of the alleys leading out of the High-street, the lanes in the Calton, but particuarly the closes and wynds which lie between the Tron-gate and the Bridge-gate, the Salt-market and Maxwell-street. These districts contain a motley population, consisting in almost all the lower branches of occupation, but chiefly of a community whose sole means of subsistence consists in plunder and prostitution." Is that a very densely-peopled district which you have yourself investigated?—Yes, upon various occasions.

1073. You state you went with the police-superintendent to investigate the state of the people, and visited those districts four times?—Yes, I did.

1074. And you go on to say, "I have seen human degradation in some of its worst phases, both in England and abroad, but I can advisedly say that I did not believe, until I visited the wynds of Glasgow, that so large an amount of filth, crime, misery, and disease existed in one spot in any civilized country." That is a correct account of what you saw?—Perfectly so; and I may state that, in addition to the superintendent of police, two magistrates of Glasgow accompanied me on other occasions, and they would corroborate the evidence.

1075. In those districts did you see filth and dirt lying in heaps, and neglected in such a way as to be likely to generate fevers, and be injurious to the health of those poor people?—Yes; and in fact in the centre of these courts there is an immense dunghill, upon which all sorts of filth are thrown.

1076. Is it within your knowledge that in consequence of this neglect now adverted to, fever does prevail there to a great extent?—I have Dr. Cowan's authority for saying it, and it was the general opinion of the medical men in that neighbourhood.

1077. That the district was very unhealthy?—Yes.

1078. You say, "In the lower lodging-houses ten, twelve, and sometimes twenty persons of both sexes and all ages sleep promiscuously on the floor, in different degrees of nakedness. These places are generally, as regards dirt, damp, and decay, such as no person of common humanity to animals would stable his horse in." That is a correct account of the districts you saw?—Yes, it is.

1079. You go on to say, "Many of the worst houses are dilapidated and in a dangerous state, and are condemned by the Dean of Guild's Court; a sentence of which the execution appears to be generally postponed, and which renders these abodes doubly desirable to the occupants, as the passing of sentence prevents the levy of rent. The lower parts of most of these houses are either spirit-shops, pawn-shops, or eating-houses." That is a correct account of what you saw?—Yes, it is.

1080. "The population of all those districts," you add, "is probably 30,000; it certainly exceeds 20,000; they consist in a great portion of the Irish and of Highlanders." Those are districts you visited yourself?—Yes.

1081. You go on to add, "Many of the younger girls, and there are a multitude of them, who frequent these places, appear to have been driven there by sheer want, and applied to Captain Miller to be rescued from misery in great numbers." That is correct?—Yes.

1082. "No efficient aid can of course be rendered them under existing institutions, and hundreds in a year become inured to crime, and pass through the rapid career of prostitution, drunkenness, and disease to an early grave." Captain Miller is the superintendent of the police there?—Yes.

1083. He went with you, and gave you every facility in seeing these places?—Yes.

1084. You subsequently state, "The spirit-shops in Glasgow amounted, in

J. C. Symons, Esq.

30 March 1840.

the last census, to one in every ten houses throughout the city; the proportion is of course greater in the low districts." That is so?—Yes.

1085. Do you not consider that the excessive drinking of spirits there is also a cause of great mortality among them?—Very great indeed; it is one of the main proximate causes.

1086. Do you think that the state of their dwellings and habitations, and the want of cleanliness among them, leads to the spirit of drinking?—Yes; and I should say that the spirit of drinking leads to the want of cleanliness; it acts and re-acts.

1087. Then you give the amount of spirits consumed in England, Ireland, and Scotland; the statement is, that in England the population is 13,800,000; Ireland, 7,700,000; Scotland, 2,300,000. Then you give the number of gallons of spirits: in England, 12,300,000 gallons; Ireland, 12,200,000; Scotland, 6,700,000 gallons. "Thus it appears, that the quantity of spirits consumed in England is seven pints and one-ninth per head on the population; in Ireland rather more than 13 pints per head; and in Scotland 23 pints per head per annum." And you add also, "When the drunkards in Glasgow become too poor to satiate their appetite for spirits, they now resort in great measure to laudanum, which, in an adulterated state, is consumed in considerable quantities, and regularly sold by many of the chemists." Do you believe you have good authority for the statements you have made?—Yes, perfectly; they are correct as to the spirits; I had that from the Parliamentary documents; and with regard to the laudanum, it has been controverted; but, nevertheless, I have it from several persons I believe to be quite competent to state the fact.

1088. Mr. *Brotherton.*] Have you made any comparative statement of the different cases of insanity in different countries?—No, I have not; it hardly entered within the sphere of my duties to do that.

1089. *Chairman.*] You then state the neglected state of these districts, and the consequences, and you go on further to state a part I particularly wish to call your attention to, on the subject we are upon: "Such being the state of things in large districts of Glasgow, it is not surprising that the number of persons who died last year was 10,270 (being at the rate of 1 in 24.63 to the whole population), or that out of that number 2,180 died of typhus fever, which never leaves Glasgow; or that personal outrages, vitriol throwing and assassination, should occur in the open streets; the only wonder is that health and life are half as well preserved as they are." Do you feel confident that is a correct statement?—Yes, certainly; I know that they have been made by official persons with the utmost care.

1090. Having had an opportunity of inspecting the condition of the poorer classes of Glasgow, I observe in another place you add: "It is my firm belief that penury, dirt, misery, drunkenness, disease and crime culminate in Glasgow to a pitch unparalleled in Great Britain:" is that your confirmed opinion, having seen other districts as well?—Perfectly.

1091. Mr. *Tufnell.*] What districts have you seen in England to compare it with?—I have a general knowledge of the lower parts of Manchester, and some of the districts in London.

1092. *Chairman.*] And other parts of Scotland?—Yes, all the large towns in the south of Scotland.

1093. What is there peculiar in Glasgow that should make them so filthy; is it the want of drainage, or are the habits of the people less cleanly than in other districts of Scotland?—There are several causes; there is a great emigration of the Irish and of the Highlanders.

1094. That would be a casual population?—No, I can hardly call it casual; the mortality is very great, and that is supplied by a constant pouring in of the poor and destitute into the town.

1095. Mr. *Brotherton.*] Many families live in those houses of which you have spoken?—Yes, many of those houses are lodging-houses.

1096. *Chairman.*] Did you go into any of the houses to see whether they were in want of ventilation, by passing the air through?—Yes, in hundreds of instances in Glasgow.

1097. Is it your opinion that sanitary regulations, with respect to drainage, and cleansing, and ventilation, and the improvements that are suggested upon these

these points, would be a material benefit to the poorer classes in Glasgow?—I have no doubt that it would remove the present evil.

1098. Mr. *Tufnell.*] What evil would you attack first?—Perhaps spirit-drinking is one of the great causes; the want of education is the first cause, which will hardly enter into the scope of your inquiry; but there is no doubt an immense accumulation of evils that sanitary regulations might cure.

1099. *Chairman.*] You have spoken of the great evils arising in the neglected districts from spirit-drinking, which is not within the scope particularly of our inquiry; but I will ask you one question upon the subject of education. I find one statement, in which you say that "In Anderston, out of 160 children under 12, and above three years of age, 37 are at school, 15 are educated gratis, and 123 are not receiving any education at all. The school fees here are 2*s.* 6*d.* a quarter. This proportion of ignorance to education will be nearly the same throughout Glasgow." That is a correct statement?—From the best sources of information I have, that was the case.

1100. Two children out of three, between those ages, receive no instruction whatever?—Yes, that was my impression.

1101. And you believe it to be the case, as a general result?—Yes, very nearly so; certainly between three and 12 years of age; and I may state, in explanation of that fact, in Glasgow very young children are put to work at a very early age, at light operations in weaving.

1102. Do not the factory regulations extend to Glasgow?—Yes, the factory regulations; but not to hand-loom weaving, or the spinning at home, or winding on the cops, which is generally their employment.

1103. Are there many occupations in which the humbler classes of children are engaged, and upon which there is no regulation to prevent them being employed at those early ages?—Many.

1104. Mr. *Brotherton.*] How young are they employed?—At eight years old.

1105. At what age are they taken into mills of any kind?—About the same age.

1106. Are you aware that the Factory Act prevents them being taken younger than nine years of age?—Yes; but I am confident that is evaded in many instances.

1107. And younger children are employed in the factory than nine years of age?—Yes, by a year.

1108. *Chairman.*] Are there any other districts you would wish to speak to with regard to sanitary regulations, or the improvement of their condition, either round Glasgow or the neighbourhood?—Edinburgh stands in need of improvement, but nothing is so bad as Glasgow. The same remark as to the necessity of the regulation of the lodging-houses would apply to Edinburgh.

1109. And as to the cleansing and sewerage?—Yes.

1110. Have you looked through this pamphlet of Dr. Cowan's?—Yes, I have.

1111. You are acquainted with him?—Yes.

1112. Have you any doubt that this is a correct report of the state of facts?—Not the slightest.

1113. I observe he states generally, that in consequence of the neglect of cleansing and proper regulations in Glasgow, fever has been very prevalent of late years?—Yes; and since that has been published, I saw him in the last two months, and he told me that in every point of destitution and mortality the amount had increased.

1114. Here is a statement put in, in page 32, in which he says, "The increasing rate of mortality in the city of Glasgow has given rise to much speculation as to its causes, and many opinions have been promulgated regarding it;" and then he goes on to say, "The following table exhibits the proportion which the total deaths, and the deaths under 10 years of age, bear to the population at different periods, and the per-centage which the deaths under 10 years are of the total deaths." Then there is a return given for 1821: the rate of mortality was one in 39 and a fraction; in 1831 one in 30 and a fraction; in 1835 one in 29 and a fraction; in 1838 one in 26 and a fraction; showing it greatly increased from 1821 to 1838, from one in 39 and a fraction, to one in 26 and a fraction; have you any doubt that that is correct?—Not the slightest; it was made by the town council.

J. C. Symons, Esq.

30 March 1840.

1115. Now, in 1821, among children under 10 years of age, it is one in 75 and a fraction; in 1831 it amounted to one in 60 and a fraction; in 1835 it is one in 49 and a fraction, and in 1839, one in 48 and a fraction; showing an increased mortality in the younger classes as well as in the others; and he adds to it this remark, "The above table presents but a melancholy index of the state of public health since 1821, and shows how severely, during the last two years, the augmented mortality has affected the earlier years of life." Is that correct?—I believe it is so.

1116. He adds, "The lesson which it affords should not be lost, but should stimulate our civic rulers to the investigation of the causes which have produced such a frightful rate of mortality, a rate which it is believed is unequalled in any city in Britain." Is that your opinion?—It is.

1117. Mr. *Cowper.*] Has there been any epidemic diseases in the town lately?—The typhus fever is the prevailing disease; they had the cholera also.

1118. Is the typhus fever generally prevalent in Glasgow?—Yes, it is generally existing there.

1119. Is it more prevalent at particular seasons than others?—I do not know.

1120. Mr. *Tufnell.*] Is the town well supplied with water?—I believe very badly indeed, except by the Clyde.

1121. Mr. *Brotherton.*] Are there water companies established there?—Yes, I believe there are; there was a dispute about it the last time I was there.

1122. Mr. *Tufnell.*] Are the houses supplied by wells?—No; there is a public pump for the whole district at those points, to which they send their buckets and get water.

1123. Mr. *Brotherton.*] Do you think the mode of building in Glasgow conducive to health?—No; it is very confined, and very unwholesome.

1124. Would not single cottages be more conducive to health than those large houses where so many families inhabit?—Unquestionably, I should say so.

1125. Mr. *Tufnell.*] Has there been any rapid increase of building or population of late?—I am not able to state as to the buildings.

1126. *Chairman.*] There has been a very great increase in the population?—Yes, I believe so.

1127. I believe it has increased more in the last 20 years than any other town in Scotland?—I believe so.

1128. Which would require corresponding improvement in its regulation?—Yes.

1129. From what you have seen, there has not been any corresponding improvement in the regulations?—No.

1130. Mr. *Tufnell.*] Has the attention of the authorities in the town been called to those circumstances?—Yes, they were; but at the time I speak of the town council was balanced, and nothing was done; but there was a general feeling that something ought to be done by the authorities.

1131. In the way of drains, or of scavengers?—It was proposed even to throw new streets through this district.

1132. Are there commissions of sewers there as in London, with power to make sewers?—I believe not; I believe the whole authority is vested in the town council.

1133. Mr. *Cowper.*] Do you know the extent of the powers of the council with regard to those subjects?—No; I believe it is very great.

1134. Mr. *Brotherton.*] In making your calculation of the number of deaths in Glasgow, did you take it upon the population of the last census in 1831, or upon the increased population since that time?—I did not make the statement myself, it was made by the town council; Baillie Paul was appointed to it, and he did it very ably; he assumed that the increase was as great since the last census as before.

1135. *Chairman.*] So as to take it as nearly as possible at the present census?—Yes.

1136. Mr. *Ingham.*] In the miserable parts of the town you have alluded to, has it always been the habitation of this class of people, or were they better houses formerly, and deserted in consequence of any change in trade or other cause?—No, the houses seem to have been built for that purpose; the construction

struction of the houses shows that they were let to one person as landlord, who let them out at so much a night.

1137. *Chairman.*] This report of Dr. Cowan says, in page 12, "We have proved, that since 1816, but more particularly during the last seven years, fever has been steadily increasing in the city of Glasgow, and that its victims constitute within a fraction of 55 out of every 100 patients treated in our hospitals, independently of those treated by the district surgeons within the burgh." That is an accurate account, you believe?—I have no doubt it is.

1138. It goes on to say, "This increase, especially during the last seven years, has taken place not in years of famine or distress, but during a period of unexampled prosperity; a period when the wages of labour have been ample;" and in another part it states, "The expense that falls upon the district by means of persons thrown out of work by the fever has been very large." That is within your knowledge?—Yes.

1139. Then it says, "We may safely assume that the 12,895 individuals treated in the fever hospitals during the last seven years, all, with few exceptions, depending on their daily labour, and extending the benefit of that labour to others, were out of employment for a period of at least six weeks"?—Yes, I believe all that to be perfectly correct; you may implicitly rely upon everything you find in that book; it is attested by all the authorities in Glasgow.

1140. This medical man goes on to suggest the means of remedy, and says, "A few thousand pounds judiciously expended in opening up the districts most densely populated, and in other obvious ways, would greatly tend to alleviate the pressure of our heaviest municipal tax, the fever-tax." Would that be the case, do you think?—Yes, I am quite sure it would.

1141. Mr. *Ingham.*] What is the fever-tax?—For the relief of the poor, and the maintenance of the hospitals.

1142. Mr. *Brotherton.*] Is there a fever hospital?—Yes; a very large ward of the hospital is set apart for that purpose.

1143. *Chairman.*] The concluding part of the report has this statement; after prefacing that the same evils will again arise, he says, "During the interval, however, the moral and physical condition of the inhabitants demands the immediate attention of the municipal authorities, to alleviate where they cannot remove the evils attendant on a dense, a manufacturing, and a rapidly-increasing population." That is confirmed by your experience, the necessity for such improvement?—Perfectly.

1144. Can you state anything with regard to the state of Manchester, and with respect to the more densely-peopled portions of Manchester, the number of persons residing in cellars, or the necessity for improvement?—No, only very generally, and the same as to Birmingham and Liverpool, and other large towns.

1145. From the general view you have taken of the densely-peopled districts in those other large towns, do you think that any of them are so bad as this town you have mentioned, Glasgow?—No, not any, in my judgment.

1146. Are you of opinion that in several of them, nevertheless, improvements may be made by sanitary regulations, and more effectual draining and cleansing?—I have no doubt of it.

1147. Mr. *Tufnell.*] Are the houses inhabited by the lower classes of Glasgow so constructed as to have a free current of air?—No, in hardly any instance of that sort; they build the one against the other, and a court-yard for the reception of filth in the centre.

1148. Mr. *Brotherton.*] Have the poorer classes any conveniences, as privies?—No, scarcely an instance of it; that is one source of revenue to the landlords, the accumulation of dung in those large towns.

1149. This dung is removed?—Yes, which is another cause of fever; the removal of that dung sends out a great deal of effluvia.

1150. The inhabitants of several houses have to go to one privy?—They have no privy; the excrement is flung out.

1151. *Chairman.*] There is no regard to decency in those respects?—No, not in those bad districts.

1152-3. In page 45 in this report it states, "The Mortality Bill of 1837 exhibits a rate of mortality inferring an intensity of misery and suffering unequalled in Britain, and not surpassed in any city that we are acquainted with on the continent of Europe. The rate of mortality in 1832 during the prevalence

lence of cholera was one in 21.67, but owing to the shorter duration of cholera, less misery and pauperism was produced by it than by fever." Do you believe that to be an accurate account?—Yes, I should think it was.

1154. Do you think, comparing it with towns you have seen on the Continent, it is worse in these parts of Glasgow than almost any part you saw there?—Yes; I can speak more decidedly as to the towns on the Continent; I have investigated them more closely, and I have seen nothing equal to Glasgow.

1155. Not in Lyons?—No, nor in Brussels nor Paris.

1156. Some of the back parts of Paris are in a very bad state?—Yes, during the depressions of trade.

1157. They are not so filthy?—No.

1158. Mr. *Ingham.*] The use of tobacco is more prevalent abroad?—Yes.

1159. Mr. *Brotherton.*] During the prevalence of cholera, were not there public subscriptions to prevent the pauperism that would have arisen otherwise in Glasgow?—I am not aware of that; I was not there at the time.

1160. *Chairman.*] With respect to the ventilation of those districts, did you go into the habitations and rooms inhabited by those poor persons, and find there was very little ventilation, and that everything was stuffed into the windows to prevent the air passing through?—Yes, in Glasgow and all the large towns that was the case.

1161. Are they aware of the evil consequences arising from it?—No, but they have an objection to ventilation rather than otherwise.

1162. It has an injurious effect upon their health?—Yes.

1163. That arises from ignorance and the want of instruction generally; any education which might make them docile upon such points and give them information would be beneficial?—Yes.

1164. Therefore any useful practical education would have the effect of opening their minds to hints which might be useful to their physical condition?—Yes.

1165. Mr. *Brotherton.*] Might not their being employed in mills and warm rooms have a tendency to cause them to prevent ventilation?—Yes, I think it very likely that that may be the case; they are very much heated in the mills, and when they come out they require a greater degree of warmth than other persons would.

1166. *Chairman.*] In fact many of those persons are not occupied in mills?—A great many have no occupation but thieving or prostitution in those worst districts.

1167. And the remarks you made of the want of ventilation, and the necessity of ventilation, apply to the poorer classes in densely-peopled districts in other places as well as Glasgow?—Yes, to a great degree. In the cotton mills, the health of the people is much greater in those mills where the rooms are built of sufficient height and ventilated.

1168. You have, in these most useful investigations abroad upon the state of the working classes, made some remarks upon the state of health in districts where there were lime-kilns?—In Lyons, which had many incidents likely to lead to cholera, and in the direct line of it, with a population of 60,000 or 70,000, I asked the reason it escaped, and I was told that it was thought to be owing to large lime-kilns on the banks of one of the rivers in the centre of the town; that the miasmata were spread over almost all parts of the town, and it was considered that that was one of the chief preservatives against the cholera, in destroying malaria.

1169. Slacking lime is not unusual as a precaution in houses affected with fever in England?—No, it is not.

1170. Did you happen to hear from the medical men there their opinion upon the subject?—No, I did not. I heard it from a gentleman of great respectability there.

1171. Has your attention been called to anything of the same kind in England?—No; but the same thing took place at Avignon.

1172. Have they any manufacture of alcholies at Lyons?—I do not know.

1173. Mr. *Tufnell.*] Do the children of Glasgow appear emaciated?—Yes, strikingly so.

1174. More so than in other towns?—Not perhaps more so than in Manchester; but there was a difference.

1175. *Chairman.*] You think this arose from the want of sanitary provisions?—

sions?—Yes. At Egerton there is an immense manufactory, and the people look healthy there. That is a country district, and the greatest care was taken of them. It belongs to Mr. Ashforth.

1176. You think there is nothing in the system, if well managed, inconsistent with the health of the inmates engaged in it?—Nothing, if the ventilation was well attended to.

1177. Is that one of the works of the same firm that have a mill at Hyde, in Cheshire, of which such a good account is given?—I believe so.

1178. Mr. *Ingham.*] At Glasgow, there is a large space, where the people may take exercise?—Yes, a large green.

1179. Are there any means resorted to to keep walks for the people?—It is built over, except on this green.

1180. How many acres is the green?—It may be 100 acres.

1181. Is it laid out with good walks?—No; it is a large green; it is merely a park.

1182. Mr. *Tufnell.*] Is there anything in the situation of Glasgow that should render it unhealthy?—No; quite the reverse. The air is uncommonly good, if you get out of the smoke.

1183. Mr. *Ingham.*] There is sufficient slope to carry off the filth?—Yes.

1184. Mr. *Tufnell.*] Are there any natural disadvantages?—No.

1185. It arises from the bad mode of building?—Yes; and the bad habits of the people.

1186. Mr. *Ingham.*] What is their diet?—They drink a good deal; and that reduces them to a very scanty diet, as far as meat is concerned.

1187. Mr. *Tufnell.*] Do they live much upon fish?—No; principally potatoes and a little bit of meat or fat stewed up together. The quantity of meat is in proportion to their means.

1188. Mr. *Ingham.*] And oatmeal occasionally?—Yes, for breakfast, throughout Scotland.

Charles Richard Weld, Esq. called in; and Examined.

1189–90. *Chairman.*] I THINK you have been engaged in investigating the state of a portion of the city of Westminster?—Yes, I have.

1191. A densely-peopled district, where the poorer inhabitants reside?—Yes.

1192. Close here almost?—Yes, close to this place.

1193. Will you be good enough to state, in the district you have investigated, what is its state, with regard to cleansing and draining, and the ventilation of the houses, and whether it is neglected in those respects in some of those populous places?—The drains are in good order; my answers will apply to the two parishes of St. John and St. Margaret; I cannot speak to any other; in those two parishes the drains are in good order, but the ventilation was decidedly bad in the rooms.

1194. Your observations do not extend to the whole of the parishes?—Yes, they extend to those parishes.

1195. Are you aware of the state of the drainage on the outside of the parishes, where the houses are not so confined?—I do not know anything of the drains outside the suburbs of those parishes.

1196. Were they in those alleys and courts clean or dirty?—In the courts the cleansing was bad.

1197. Was there a closeness about them, and a smell?—Yes, there was.

1198. Is that injurious, in your opinion, to the health of the inhabitants?—Decidedly.

1199. In going up the stairs common to many families, how did you find them?—Very close.

1200. With respect to the habitations of many of the persons you went into, how did you find them as to ventilation?—Invariably the ventilation was bad.

1201. Were there many districts in which there was no air passing through, a sort of *cul de sac*?—The buildings are erected without the slightest reference to ventilation, and I found them extremely close indeed.

1202. Does it appear to have been the object to pack them as close as possible?—Yes.

1203. Are you aware of fever prevailing in any portion of this district?—

C. R. Weld, Esq.

30 March 1840.

When I visited these two parishes, with a population of 16,000, the proportion of mortality was 1.8 decimal per cent., which was very small.

1204. It was a more healthy period than usual?—Yes, I believe it was.

1205. Had you an opportunity of knowing anything respecting the habits of the persons residing in those poor localities, as to their general habits of cleanliness, and so on?—Yes, I know something of their habits; it appears to me that the great pressure that they suffer from is rent; consequently they are debarred from those comforts they might otherwise avail themselves of. For the sake of saving a shilling or two, they are content to inhabit a small room which is badly furnished, with bad ventilation, and all the other evils that follow as a matter of course.

1206. Do the landlords exact high rents from them?—Extremely high.

1207. Do the landlords appear to give much attention to the decent condition of the dwellings from which they derive so large a rent?—Just the reverse.

1208. What is the rent they pay?—Two shillings and eleven-pence farthing a week on the average, exacted rigorously each Monday morning: in default of which they are turned out; it is very rare they run on two weeks without payment.

1209. Mr. *Tufnell.*] That is for a whole room?—Yes.

1210. *Chairman.*] Are there many cases where a whole family is in one room?—Yes, the majority of them.

1211. Those are the working classes?—Yes, exclusively.

1212. Do you mean that the majority of the working classes have only one room for their whole family?—Yes.

1213. To live and sleep in?—Yes.

1214. Both parents and children?—Yes.

1215. Mr. *Cowper.*] Did there appear to be different families in one room?—No, they appeared to be the same family, as they stated to me.

1216. Do they take in lodgers?—No, I believe not.

1217. *Chairman.*] Now, with respect to the conveniences appendant to these humble places; are there any that are well-regulated, and kept decent and clean?—In the houses in such streets as Orchard-street and Tothill-street, the privies were pretty good, but in the courts extremely bad, and I frequently found the privies without doors, and filth upon the seats of the most disgusting description; they appeared to have no idea of anything like decency in the courts.

1218. Were they in such a neglected state as in hot weather to be injurious to the health of the people?—Unquestionably.

1219. Mr. *Tufnell.*] The chief evil appears to be the uncleanly habits of the people who inhabit these places?—Yes; but if you ask me the chief evil the labouring classes have to contend with, it is the high rents. It is a curious fact, that in Manchester there were 26,000 families visited, and the average rent was found to be 2 *s.* 11 *d.* without the fraction of a farthing, and for that they have a house to live in; whereas in Westminster, for 2 *s.* 11 ¼ *d.*, they have only a room that does not average 12 feet square.

1220. Mr. *Cowper.*] Are the gutters of the courts ever cleaned by any of the parish authorities?—No, the courts are not cleaned.

1221. The scavengers do not come there?—No, they do not penetrate those courts.

1222. Sir *Harry Verney.*] How many of those rooms are there generally in a house?—On the average eight through the two parishes.

1223. Are any of those below ground?—No, the eight are above ground.

1224. Is there generally any cellar?—Yes, but generally they are used as stores, as old-iron stores; a great quantity of soot is deposited by chimney-sweepers in them; they are not inhabited; there are a few instances where they are; a dozen or more in the two parishes; but, generally speaking, they are not.

1225. Are they floored generally with wood, or stone, or brick?—Wood.

1226. Are they generally very old houses?—Very old.

1227. With regard to the rates and taxes of those houses, do you know whether they are generally punctually paid?—I do not know; I am not aware how they are paid; there is no doubt that the rent of the houses bears a very small proportion to that obtained by sub-letting.

1228. *Chairman.*]

1228. *Chairman.*] The landlord exacts a very high rent, and pays a very small one?—Yes.

1229. Including taxes?—Yes.

1230. Sir *Harry Verney.*] Does the landlord take upon himself the payment of the taxes?—Yes.

1231. And the rates?—Yes; he takes upon himself to pay everything, and his return is in weekly sums obtained by letting his lodging-house in single rooms.

Joseph Fletcher, Esq. called in; and Examined.

1232. *Chairman.*] YOU are one of the Assistant Hand-loom Weaver Commissioners?—I have acted in that capacity, and am secretary to the commission.

1233. In the course of your investigations in that matter, I believe your attention was directed to the Midland districts of England?—It was, and more especially to Coventry and the contiguous districts.

1234. Can you give the Committee a general account of what the state of attention to cleanliness, and the comforts of the poorer inhabitants, in regard to regulations for ventilation and drainage in Coventry, and any of the districts round, is?—There is a material distinction between Coventry, and the towns in the south, from those in the north; the habits of the people of Coventry are remarkably superior to those of the people of Macclesfield and Manchester; their homes are humble, but their habits of cleanliness, compared with those which prevail in the north, are quite conspicuous.

1235. With respect to the state of the dwellings of the poorer class of weavers at Foleshill, and some districts round there, in your report you state that they were in a very dirty, and poor, and neglected condition?—The habitations themselves somewhat vary; the trade is a very fluctuating one, and it is obvious that the buildings have been erected in times of good trade, therefore a good many of them are of a comfortable structure, but the people inhabiting them, trade being so fluctuating, are on the whole in a very miserable condition; and in the remoter villages they are more miserable than in the towns. In the remoter villages, where the habits of the people are more uncultivated, what is very conspicuous about the houses is the filth, and pools of stagnant water, more especially in the villages of Bulkington and Hartshill.

1236. Those are inhabited by weavers in the silk trade?—They are ribbon weavers.

1237. With reference to the state of those silk weavers, which you have stated is comfortable, is it your opinion that their physical powers and health have been apparently injured by the life they lead, as compared to what it formerly was?—Upon that I have the testimony of the oldest inhabitants and medical men in the town of Coventry. Mr. Abraham Herbert, the mayor of Coventry, who was a weaver in his youth, though now a man of wealth, describes the habits of the weavers of former times as those of greater activity, though of more rudeness; that they were more robust, though more rude; that they had then abundant opportunity for exercise, but that now the lands are enclosed, and they have only the roads to walk upon, or the pot-house to go into; and the effect of this change, both the medical men, Mr. Herbert, and other old inhabitants testify to be decidedly injurious to their physical character; at the same time that perhaps their moral habits are not worse.

1238. It has been stated particularly, that in the neighbourhood of the populous town of Coventry there was a large open space of several hundred acres, on which the poorer inhabitants used to desport themselves, in those games and amusements which gave them health, on times of holidays, which land has been enclosed, and from which amusements they are now debarred?—Yes; it formed part of the old Royal Manor: it is now called the Park, and is enclosed, and forms part of the property of the Marquis of Hertford.

1239. It is to this cause that the mayor attributed this change?—That was one of the most conspicuous of them to which he adverted.

1240. Do you think that they stand in need of some place on which they could get out to take exercise to promote health?—Most assuredly; and it seems possible that that object may be accomplished in an Act now before the House of Commons for enclosing the Lammas-lands. The people cannot go upon the Lammas-lands at all times, but there is a common right during part of the year, and it is proposed that the town shall have the exclu-

Joseph Fletcher, Esq.

30 March 1840.

sive property in a limited portion of the soil, abandoning the common right during part of the year over a greater extent, and out of this portion it is designed to reserve a part for public exercise.

1241. Does the same observation apply itself generally to the other populous towns you have noticed, with respect to the reservation of some open space?—Yes; the general observation of the want of such open spaces applies to almost all the large towns, or most of those that have so rapidly risen in our commercial progress, whilst scarcely any one of the cases presents the fortunate circumstance which Coventry possesses, by which it may be supplied. Birmingham is entirely devoid of it, and Manchester and Macclesfield are without any such convenience.

1242. Mr. *Cowper.*] Do you know what the games and recreations were to which the mayor of Coventry alluded?—Football and quoits, and bandy, and bowls, and cricket, which has been a game used from very early times.

1243. Do any of the inhabitants of the town now indulge in any of those sports?—They have greatly declined among the young men, and the mayor accounted for the change of habits by saying, that the young men instead of indulging in those athletic exercises, from which they are debarred, become more early attached to mates, or, to use, I think, his own expression, went sweethearting much earlier than they used to do; that is their amusement instead of the ruder games.

1244. *Chairman.*] But it was his opinion that their constitutions were injured by the change?—Yes.

1245. Mr. *Cowper.*] Do you find generally that there is a want of active amusements amongst the labouring classes?—Yes, it is general among the manufacturing populations.

1246. They have no means for it in these large manufacturing towns?—In large towns they have not; in some of the places in the country even they have no opportunity for athletic exercise; the best exception I found was at Bedworth, five miles from Coventry, where there is an improving trade, a well-fed population, and a kind-hearted rector; there, although rude in their manners, their habits are generally healthy and sound.

1247. What is the name of the rector?—Bellairs.

1248. *Chairman.*] Are you aware of another benevolent individual who has dedicated a large space to the same purpose, Mr. Strutt, near Derby?—I have heard of it; I do not know it from especial inquiry.

1249. Mr. *Ingham.*] You are aware that Bedworth was greatly depraved and brutalized before that Reverend clergyman came there?—It was.

1250. What was the first step he took to accomplish the change that has taken place?—He took pains to understand the parish when he first came into it; he is a gentleman of strong purpose, as well as of cultivated mind, and on entering the parish, understanding what it was, he had a meeting in vestry, and told the civil authorities, the constable and churchwardens, and so forth, he should expect them to discharge their duties in like manner that he intended to discharge his; then, by good precept and example, urged those habits of morality and order which he knew to be necessary to their welfare, and pursued the disorderly, through the parish officers, with the fullest rigour of the law; he, as a matter of morality, compelled the civil officers to discharge their duties, at the same time that he discharged his by precept and example.

1251. Did he establish any public games?—No, he did not adopt measures of that kind; they were left to the spirit of the young fellows themselves.

1252. Mr. *Cowper.*] Do you believe, in former times, the labourers had more leisure than they have at present?—Decidedly they had; they never worked then so long as they are now working, and they must have had more time for play.

1253. Have they now time for playing at those games to which you have alluded?—I will answer with pleasure, if you will have the goodness to point out some particular class of the population to which you allude; the circumstances of each vary so greatly.

1254. The weavers?—In the country districts near Coventry the weavers, however poor, take time to play; and the time that they so abstract from labour is not always so well applied as it might be for their physical benefit and moral health; but they do abstract time from labour which might be employed in healthy exercise.

1255. Do they take some hours on each day?—They rather take it by days in each week; they absent themselves from work nearly the whole of Saturday, Sunday, the whole of Monday, and a little of Tuesday; then they work excessively hard from Tuesday until the beginning of Saturday, and often through the whole of Friday night.

1256. Mr. *Tufnell.*] Has that been the general custom?—I believe it has been the custom ever since the trade had its origin; perhaps the time taken for play is not so great as it used to be.

1257. Mr. *Cowper.*] What have you observed with respect to leisure hours amongst the agricultural labourers?—The agricultural labourer is restrained, by the sort of labour he has to perform, to certain hours; and still more, he is always working under the eye of his master, which the weaver is not; the agricultural labourer is as much tied to regular hours as the factory labourer.

1258. Every day he has some hours at his disposal?—The agricultural labourer has scarcely any hours by daylight except in summer-time; but such is the healthy character of his usual employment, that opportunity for athletic sports is not of the same importance to mere health in his case as in that of the manufacturing labourer.

1259. *Chairman.*] You have a general acquaintance with the district inhabited by the poorer classes in Manchester?—I have; in the autumn of 1838 I was down there at the time that Captain Jebb was making inquiries as to the petition for a charter to Manchester, and I availed myself of the opportunity that his duties afforded, of inquiring at the different houses into the truth of the signatures, to take an opportunity to go into the houses, and see in what state they were; I first knocked at the door, and then walked in.

1260. In the course of that inquiry, did you have an opportunity of seeing many of the habitations of the lower classes?—Yes, I had, in all the poorer districts.

1261. What is their state with respect to drainage, and cleansing, and ventilation, and the comfort of the dwellings amongst those classes?—With regard to the drainage, by which I must understand that underground sewerage common in large towns, I can know scarcely anything of it; and the Committee will readily acknowledge that I could not, when I mention that the town-council of Leeds, in their own admissions upon the same subject just now, could not find out whether one half the streets of their town were or were not drained.

1262. I meant with respect to surface drainage, whether in that respect they were dirty and wet, or appeared to have underground communications?—The town presents very varying appearances; on the Ancoates side it is much improved by the commissioners of police, who have put down paving of some kind, more or less; but in Irish Town, by the Medlock, and in certain other districts of the town, the old absence of pavement still remains, and in these streets the whole surface, except a little narrow slip, by which people may walk from house to house along the sides, is occupied by a great mass of filth and rubbish, pools of water and refuse, and everything you can conceive to be the offal from houses the habitations of such people.

1263. Is that applicable to several of the most populous districts?—Yes, it is.

1264. Then the smell in hot weather would be very offensive?—Exceedingly offensive, and still more injurious from the houses of that class in Manchester having generally no thorough draught; the houses stand back to back, the partition wall having a separate row of dwellings on each side, without back offices.

1265. Is not that mode of building very injurious to the health of the inhabitants?—Yes, no doubt: the Committee may imagine a partition wall between street and street, and across the end of the street, and enclosing a space so completely, that the inhabitants breathe the foul atmosphere exuded from this filth incessantly.

1266. That is the case with many of the districts in Manchester?—Yes, it is most conspicuously so in the lowest part of the town called Irish Town; the streets are not so filthy in other districts, but as to the want of a thorough draught the houses are quite as bad.

1267. In those districts there is a neglected heap of filth in front of the house, and at the back a wall enclosing whole masses of houses?—Yes.

1268. Can you imagine anything more likely to be injurious to the health of the inhabitants?—No, I cannot.

1269. What is the effect; is there a great deal of fever there?—I have not any statistics of disease in Manchester, nor shall we get them till the office of the registrar-

Joseph Fletcher, Esq.

30 March 1840.

registrar-general has been at work some time; but it must have a most injurious effect: judging from the appearance of the people it certainly has; a great deal of their pallid and care-worn appearance is not so much to be attributed to the factory system, as it is to be attributed to the sweeping together of large masses of people, with little intelligence, under circumstances so unfavourable; and the evils under which they suffer are produced from causes arising in the towns rather than from injurious influences in the processes of the cotton manufacture.

1270. Occupied as they are in the cotton manufacture, you think if their dwellings were constructed better, and those points which are so neglected were attended to, that their general health would probably be much better, and you do not see anything in that occupation, if properly regulated, to affect them?—Assuredly not, if I may judge from the appearance of persons in the employment of benevolent masters in the rural districts. I have the pleasure of knowing some of the largest manufacturers in Lancashire, and there are instances of some having the largest works, whose people and mills present the appearance, the one of health, and the other cleanliness, with good ventilation, which I should be happy to see in the persons and workshops of every district.

1271. Do you happen to know the state of one of Mr. Ashworth's mills, in Cheshire?—I know Mr. Thomas Ashton's mills, in Cheshire.

1272. Do you believe that to be well managed?—Yes; those of Mr. Ashworth, at Egerton, near Bolton; of Mr. Henry Ashworth, at Turton, near Bolton; and of the Messrs. Gregg also, show, among others, what may be done by good regulation and the kindness of the master.

1273. Do you happen to know the number of close courts built like a *cul de sac* in Manchester?—That sort of construction is less common in Manchester than in Birmingham; it prevails almost universally in Birmingham; there the labouring classes call them villages, though they are in the midst of the town.

1274. Do you not conceive that that construction is injurious to health, and that it would be productive of benefit if the air was allowed to pass through them?—Indisputably; it is the most injurious construction; and any municipal regulation that should forbid the erection of houses without a thorough draught would be justifiable to any extent.

1275. With regard to the effect upon their own health?—Yes, and ultimately upon the health of other parties in the same town.

1276. Mr. *Wilson Patten.*] How would you accomplish the object in towns?—It would be very simple: if an Act was passed providing that dwellings erected for the poorer classes should be erected only in streets having a thorough draught, and that the execution of that Act should devolve upon the municipal police, just as in London they have a Building Act, providing that the walls shall be of a certain thickness, I think it would be easily put in force.

1277. Are you aware that in Manchester there are many persons who dwell in cellars?—Yes, I am.

1278. Do you know the numbers given by the Statistical Society of Manchester?—No, I do not.

1279. You do not know that they amount to many thousands?—They must amount to some thousands.

1280. Do you not think that, to inhabitants of that class, inhabiting underground cellars by day and night must be considered injurious to their health?—There can be no doubt they are very miserable habitations; at the same time they are not quite so bad as our common acceptation of the word "cellar" would indicate; they have little open areas in front, down which there are steps, and that gives an opening to them, which would not be conceived from the word "cellar," from which you would apprehend they were entered from the inside of the house.

1281. They are something like the cellars in Monmouth-street?—Yes, you go down into a little area.

1282. Mr. *Wilson Patten.*] Did you not find at Manchester often that the cellar was the best part of the house?—Yes, it was sometimes.

1283. *Chairman.*] And that all the other parts of the house were worse?—Yes, in such cases they were.

1284. Mr. *Tufnell.*] Are those cellars paved?—Generally, with brick.

1285. Is there one family generally inhabits a cellar?—Yes.

1286. Do you think there could be any regulation with respect to the form of building the houses themselves?—Yes; whatever regulations the Legislature should think it right to ordain, on a consideration of all the circumstances;

clearly

clearly understanding that they cannot provide as good houses for the poor as for the other classes; but whatever regulations it is necessary to ordain for their health, I consider may easily be enforced.

1287. As you suggested just now, that there should be a thorough draught through the streets, do you think a similar regulation should be made as to the construction of the houses themselves?—Yes.

1288. *Chairman.*] For instance, so as to prevent their being built back to back?—Yes. If you think it right so far to interfere with the cupidity of the builders, and the acquiescence of ignorant people, there is not the least doubt you may execute it.

1289. Do you not think that some such regulations, duly considered and properly executed, would be highly beneficial to the inhabitants of all those densely-peopled towns?—I cannot express in terms sufficiently strong my conviction of the utility of some such measure; for the growth of our manufactures, and the sweeping together of vast populations, have been equally so sudden, that the people were not brought up in or prepared for the new circumstances in which they have been placed; and unless you render them assistance by municipal organization, for the purpose of good regulation, which they cannot attain for themselves, they must suffer severely. Unless the whole community combine to render the town healthy, and the place well regulated, the most frightful disorders must necessarily arise from a population so feeble and ignoran—feeble morally, and ignorant to secure their own interests—being so suddenly swept together, commonly from a rural origin.

1290. Do you not think, independent of the comforts of the labouring classes, that it is very important to the other classes, when you consider the large sums thrown upon those classes by the hospital, poor law, and other expenses?—A considerable saving of expense would undoubtedly arise from better sanitory regulations; but the extent of this saving it must be exceedingly difficult to state.

1291. But a considerable saving?—Yes, and not only a saving in the poor-rate, and in the contributions to fever hospitals, and other charitable objects, but I believe a saving would be effected in the present expenses of prosecutions, and in all the machinery necessary for the punishment of crime, which is generated as much by the filthy and miserable habits of those town populations as by their ignorance.

1292. Do you not think that that neglect of comfort and decency in their dwellings you have described in this way, has the effect in many instances of driving them to drinking, as a temporary relief from their misery?—The drinking that prevails in the large towns prevails under many influences. I should be unwilling to attribute it to actual distress, because the factory population of Manchester, with all the evils and disorders under which they are labouring, have paid among them a very large amount of wages, and what might be saved from their expenditure in spirits would go a great way towards improving their condition in other respects.

1293. Do you not think that their discomfort of all kinds, described as you have described it, has the effect of driving them to reckless courses in the way of drinking?—The general want of domestic comfort will have that effect; but the want of comfort at home arises very much from moral causes: the woman is absent from home during the day working at the mill; she has not made the home comfortable, and the discomfort of home has very greatly arisen from that circumstance.

1294. And the want of convenience at the back of the house, and the want of ventilation, all contribute to the discomfort of home?—Yes; and perhaps in the same degree to the inclination to be absent from it.

1295. Are you acquainted with the state of the lower class of the population at Liverpool?—No, I am not.

1296. Mr. *Cowper.*] What remarks have you made with respect to the physical appearance of the poor people employed in those large towns compared with those employed in the country?—They are pallid in appearance, and are slender and thin, and there is a want of that appearance of animal spirits which generally distinguishes an agricultural people.

1297. So that they appear outwardly to be a deteriorated race?—They do.

1298. Mr. *Wilson Patten.*] In your observations have you been enabled to judge for yourself whether that was attributable to the nature of their work in the factories or their residence in these towns?—Judging from the healthy appearance

Joseph Fletcher, Esq.

30 March 1840.

pearance of those persons working in the country factories, such as Mr. Gregg's, Mr. Thomas Ashton's, and others, I should imagine that it arises principally from their disorderly habits and the bad circumstances of the town rather than the bad influence merely of the factory employment.

1299. Do you find in the worst parts of Manchester that those employed in factories are a much more deteriorated race than they are in the other more healthy parts of the town where they are also employed in factories?—I am unable to make an accurate distinction of the population, for the hours at which I could see them at their own homes were very few. I could see them in great numbers only on their return from the mills through the chief streets, and to what parts of the town they would ultimately disperse I could not tell. I could see them at home only during the hour of their dinner, and I could not see a sufficient number during that time to answer your question.

1300. Mr. *Tufnell.*] In those country factories you stated there was more attention paid to the ventilation and the health of the children?—Several of the proprietors I have mentioned, Mr. Gregg, Mr. Ashton, and Messrs. Ashworth, pay great attention to their people; and their factory labour, except some little closeness in some of the rooms, which I believe they cannot prevent the men incurring, because the cotton spins better in a close atmosphere; excepting that, I should have no hesitation in deciding the labour of mills to be as healthy as any labour can be.

1301. You think if the same attention was paid to ventilation in those factories in the town as in the factories in the country, that the health of the people might not suffer more?—Certainly not, from causes connected with their labour alone.

1302. *Chairman.*] And attention should be directed to the points you have spoken to about the habitations?—Yes.

1303. Do you know anything of the supply of water at Manchester?—I do not.

1304. Do you know of there being any baths accessible to the poorer class?—I do not know it; there must be a great want of them from their appearance.

1305. Do you not think if there were baths or bathing-places to which the people could have resort, it would promote their comfort?—There cannot be a doubt of it, and it would be a subject worthy the consideration of the philanthropist.

1306. Mr. *Ingham.*] Is there not a great escape of hot water from each large mill?—Yes.

1307. So that there might be a reservoir of hot water provided without any expense, except a vessel to contain it?—Yes; were their habits of a kind to make them desire it, and the master of such active benevolence as to aid in supplying it, such baths would be provided, and would be highly useful.

1308. You say that a great deal of the want of the comforts of home arise from the absence of the woman?—Yes.

1309. Are the women at all familiar with those circumstances that make a home comfortable?—It depends upon what their previous habits have been; the young women employed in the factory in early life, turn out generally bad housewives, and their places present an appearance of disorder; it is not a home that they have; it is a house, but not a home.

1310. Would it not be desirable to mix something of household instruction in all those schools where the females go, so that they might learn something of cleaning the house or cookery, so as to make the husband's home comfortable?—No doubt; but without disputing its utility, the girls, according to the present system, go so early to the manufactories, that they may, before they become wives and mothers, have lost all ability to do anything but sew.

1311. *Chairman.*] At all events such instruction might be beneficial to them?—Yes, undoubtedly.

1312. Do those remarks you have made with respect to the necessity of enforcing, by some mode or other of legislative enactment, the inspection of dwellings and the regulation of drainage apply themselves generally to other manufacturing towns, with the particular circumstances of which, however, you may not be so familiar?—In every large town I have been in, I have seen circumstances that induce me to think that the same observations apply to all our great manufacturing towns, those especially in the north.

1313. All those great manufacturing towns which have risen up with large populations in the last 30 or 40 years; do you think the same observations apply to them?—Yes; the population has been brought together under municipal institutions

institutions, calculated for a rural people. Manchester has had to this day merely a manorial constitution; that is, until the day it got its charter. Bolton is under merely a court leet. These towns have had nothing but the old leet jurisdictions.

1314. The improvements had not kept pace with the increase of the population, and the necessities of the inhabitants?—Their municipal institutions are quite unfitted for masses of people so large.

1315. Can you state what are the amusements and recreations of the operatives of Manchester?—None athletic, except when a number of the more disorderly steal off to the borders of Cheshire or Yorkshire,—to one of these neighbouring counties,—to have a "mill," as they call it.

1316. How do they employ the Sunday afternoon?—The whole Sunday is too frequently lost in either drinking or inactive idleness. It is a most painful thing at Manchester, with the full knowledge that there is a vast labouring population around you, to observe that the whole Sunday is passing away without seeing the great mass of the labouring classes, as you would see them here, with their wives and children walking out, and you wonder where they are; they are too numerously at home in their dirt.

1317. *Chairman.*] Have they anywhere to walk?—No; only the dusty roads.

1318. Mr. *Tufnell.*] Is that the case at Birmingham; do the mechanics confine themselves at home on Sunday?—No.

1319. You have seen large classes walking out there, probably?—Yes; there are large classes there very superior in condition; the constitution of the trade of Birmingham is very different from that of the Manchester manufactures; there are great classes of Birmingham men highly paid, indeed, who, if they had moral conduct equal to their earnings, would be in exceedingly comfortable circumstances.

1320. *Chairman.*] Almost every man has a house to himself at Birmingham?—Many of them have very comfortable homes, especially if they happen to have decent wives, which they are more likely to get here than in a factory town. There is nothing but misconduct to prevent there being large numbers of comfortable labourers at Birmingham.

1321. Is there much difference between the wages of Manchester and Birmingham?—I limit my observation to "classes;" at Birmingham trade depends so much more upon individual skill rather than on great combinations of capital; for that skill there is a high price paid at Birmingham, while at Manchester, skill, except among the machinists, is not wanted at all; there is a different arrangement of the classes; the highest classes at Birmingham might be, from the resources at their disposal, a very respectable class.

1322. Are they so?—There is not comfort equal to their earnings.

1323. They are superior to the Manchester men?—Yes.

1324. Mr. *Cowper.*] At Manchester is there any place, except the dusty roads, where the people can breathe the fresh air?—I believe not.

1325. That inconvenience is constantly increasing, by the population spreading itself all round the town?—Yes.

1326. Is there considerable negligence or want of regularity in the attendance upon religious worship among the poorer classes of Manchester?—I am informed that there is; and it must inevitably be so, or you would see them in the street going and coming, or walking out afterwards, which you do not; they are at home.

1327. I am told that on Sunday there is a growing want of attention to dress and cleanliness, and that sense of propriety and decency generally shown among the humbler classes in many districts, but not at Manchester and many of the large Lancashire towns?—It is not so prevalent as it ought to be in the largest factory towns, but if you take a view of all the circumstances in which these poor creatures are placed, you will not be very much surprised at this result.

1328. Do you not think that whatever their circumstances are, that negligence of this kind is likely to be attended with the worst result to their moral feelings and comforts?—A population so extensively demoralized can neither be happy in themselves nor safe to the community of which they form part.

1329. Mr. *Ingham.*] Do they work until a late hour on Saturday?—I think only until four o'clock on Saturday afternoon.

Joseph Fletcher, Esq.

30 March 1840.

1330. Mr. *Cowper.*] Have you met with any expressions of discontent with their condition?—Discontent among the lowest classes of the people does not express itself in complaints of those things into which you are now investigating; discontent shows itself in passions, not in reasoning; and the discontent which they express is not a complaint of any such grievances as you are investigating, but they immediately find another subject for their excited passions, and express their dissatisfaction with the constitution of the country, and the frame-work of society.

1331. Mr. *Tufnell.*] Has there been any spread of benefit societies, or are they general in that district?—They are by no means so numerous or general as one would wish, that is, not those that are of a permanent and satisfactory character; very often in the Coventry district they have such societies, and in Birmingham, and among the Spitalfields population; but these are chiefly what are called Birmingham clubs; an association for a year, either for subscription during the year to a common fund, to supply the wants of any who may be suffering from sickness, or on the understanding that when such sickness occurs they all subscribe to the relief of the sufferer; the contract among them lasts only for a year; it terminates with the year, and is re-commenced again; and if it has been by a regular subscription, the stock at the end of the year is divided; such clubs can never be of any use to the old man.

1332. Are not they all admitted at a certain age?—As each is a self-constituted body, annually renewed, the members, from feelings of self interest, will load themselves only with those who are not likely to be a burden beyond the average.

1333. Mr. *Cowper.*] It is a mere speculation?—It is a mutual insurance for a year.

1334. *Chairman.*] They are not registered under the Act?—No.

1335. They have no regulations to prevent their officers cheating, or becoming refractory?—No.

1336. Nor to compel them to lodge the money in the savings bank?—No; and it is proverbial the losses they sustain, through defalcation, and the very insufficient custody in which their funds are placed.

1337. Mr. *Tufnell.*] Are those Birmingham clubs of very large extent?—They vary exceedingly; sometimes they are numerous, and sometimes they are not at all so; it depends upon their locality, whether they be in towns or villages; a large portion of the manufacturing population are dispersed in villages; some of the town clubs are, I believe, extensive, some, for instance, in Spitalfields.

1338. Do they provide against sickness and want?—Not against want, merely sickness.

1339. You do not know the amount generally subscribed?—No, but it is exceedingly trifling; I think it is about sixpence a month.

1340. Are there any efficient clubs in those districts in which they insure themselves against want of employment, where a man deposits at one period, so as to enable himself to have an allowance when out of work?—No, I think not, except in the form of trades' unions, which are for a very different object. There are mutual assurances, as connected with trade clubs, to a very great extent throughout the country, but that is quite a different subject of consideration from the mutual insurances against sickness.

1341. They have very few trade-clubs to give themselves an allowance when out of work?—Very few, except in connexion with trade policy.

Mercurii, 1° *die Aprilis*, 1840.

MEMBERS PRESENT.

Mr. Brotherton.	Mr. R. A. Slaney.
Mr. Cowper.	Lord J. Stuart.
Mr. Ingham.	Mr. Tufnell.
Mr. Wilson Patten.	Mr. R. Walker.
Mr. Ponsonby.	

R. A. SLANEY, Esq. IN THE CHAIR.

Mr. *J. W. Unwin*, called in; and Examined.

Mr. *J. W. Unwin.*

1 April 1840.

1342. *Chairman.*] YOU are clerk to the Commissioners of Sewers for the Tower Hamlets?—I am.

1343. You were examined before the Select Committee on Sewers in 1834, were you not?—I was.

1344. Is the plan you produce that of the district of sewers of which you are the clerk?—Yes.

1345. There are in your district eight levels, are there not?—There are seven levels.

1346. The accounts of those levels are kept distinct, are they not?—They are.

1347. Just as much as if they were under distinct commissions?—Yes.

1348. Are these the levels; first, the Spitalfields and Wapping level, the Limehouse level, the Upper Limehouse level, the Nightingale-lane level, the Tower-hill level, the Lower Wapping or Greenbank level, Hermitage-street level, and the Hackney-brook level?—The Spitalfields, and Wapping, and the Nightingale-lane have been united.

1349. There are seven levels; the Spitalfields, Wapping, and Nightingale-lane levels are now one?—Yes.

1350. Will you enumerate the other six?—The Lower Wapping or Greenbank level, the Tower-hill level, the Hermitage-street level, the Limehouse level, the Upper Limehouse level, and the Hackney-brook level.

1351. Those plans you produce are plans of the sewers of the whole district?—Yes; the levels, I believe, are not distinctly marked out on those plans.

1352. Mr. *Tufnell.*] Are all the levels under one board?—Yes; but the accounts are kept separate.

1353. *Chairman.*] Those lines which are marked blue are the old sewers?—Yes; which were prior to 1835.

1354. Those marked red are new sewers, which have been made since 1835?—Yes; some of them not being yet quite completed.

1355. The sewers marked red and marked blue comprise all the sewers within the district you speak of?—Certainly.

1356. Take first of all the Spitalfields, Wapping, and Nightingale-lane level; it appears to begin at a place called the Meeting and Burial-ground, near Walberge-street. There are laid down in that map a number of streets, Richard-street, James-street, Catherine-street, Lower Chapman-street, Chapel-street, Ann-street, Walberge-street, Cornwall-street, and many others, in which no sewers are laid down, either old or new; is that an accurate account?—There are none cleansed by the Commissioners; but in Lower Chapman-street there is now one about to be constructed.

1357. That will communicate with the sewer in the New-road?—Yes, in Cannon-street Road.

1358. Are the streets mentioned, in which, at the present time, there is no sewer, inhabited by the poorer classes, who are considerably crowded?—They are generally; but I should state that some of the land-owners in those streets have drains which have been constructed by themselves, communicating with

Mr. *J. W. Unwin.*

1 April 1840.

the sewers; I know they have in Chapman-street, where we are going to construct a sewer now, and also in Cornwall-street.

1359. Mr. *Tufnell.*] Do you give them every facility to do it?—Yes; and we do everything we can to induce them to do so; but in some instances we cannot induce them to do it even when they have sewers.

1360. *Chairman.*] Are Great Prescott-street and Chambers-street in your district?—Both of them.

1361. In Cambridge-street, Mansel-street, and several other streets near, and Great Alie-street, there appear to be no sewers laid down?—No, not in any of those streets certainly, but there are sewers in Leman-street into which they drain; they are quite at the extremity of the district.

1362. There is another district not a great way from Spitalfields church, including Dean-street, George-street, and several others, apparently in the midst of a very populous district, Chicksand-street, John-street, George-street, Heneage-street, and a number of small streets that appear to join to those, in which also there is no sewer laid down; is that the case?—In those streets there is nothing but the underground drainage, which has been constructed by the owners; there are no sewers in those streets certainly; there has recently been a sewer constructed in Petticoat-lane, at the joint expense of the Commissioners and the City of London, which is productive of great benefit.

1363. Is there a good deal of population in those streets?—Yes, of the lower class.

1364. There is a district comprehending Fleet-street, South-street, Slater-street, Anchor-street and other streets, is there any sewer in that district?—I should think not; there are drains communicationg with the sewers.

1365. Along the line of New Nichol-street and Old Nichol-street and Nelson street there appears to be no sewer laid down?—No, there is none.

1366. Coming to Bethnal-green, Satchwell-street, Tyson-street, Charlotte-street, Tyrall-street, Hart's-lane, and Union-street, all of those appear to be small houses in a densely-inhabited district?—They are not densely populated there; there are fields.

1367. There is no sewer among those?—No; and I question whether one would be very beneficial there.

1368. In Coventry-street, Pott-street, Cross-street, Wentworth-street, and the district in that neighbourhood, not very far from Dog-row, there appears to be no sewer laid down?—There is none there, certainly.

1369. There is a district of Dock-street, Collingwood-street, Collingwood-place, and Pleasant-row; there is no sewerage along many of those streets, is there?—No; there are, no doubt, many streets in the district of the Tower Hamlets in which there are no sewers.

1370. This district, comprehending Bethnal-green, and Whitechapel, and Mile End, and so forth, is inhabited by the humbler classes, in a great measure, and is very densely inhabited?—It is, except Bethnal-green; there are parts of Bethnal-green which are principally fields and gardens.

1371. The whole of the dwellings are of the lower description, and are densely put together, are they not?—Yes.

1372. Is it within your knowledge, there are many places there in which there are lodging-houses, in which many families reside together?—I believe it is so, but I cannot speak to that from my own knowledge.

1373. Is Limehouse within your district?—Yes, part of it.

1374. There is a plan laid down in which there are three colours, blue, red, and yellow?—The reason of that was, that the yellow was an after suggestion.

1375. Do the red ones mean those which have been lately formed, or which are in contemplation?—The blue ones are all old ones, and some of those marked red have been done, but not all.

1376. Are the yellow done at all?—No.

1377. Along Gill-street, and Jamaica-place, and Rich-street, there are no sewers at present?—No, certainly not; there is a sewer at the back of Gill-street.

1378. Along Church-row there is none laid down?—There is none laid down; but I do not know that district very well; I had rather the surveyor was called upon to speak to that.

1379. Mr.

1379. Mr. *Tufnell.*] Is that plan made by the surveyor?—Yes, it was made in the year 1835.

1380. Is it filled up periodically?—Yes, it shows the whole district at one view: it was prepared with a view to the improvement of the drainage of the whole district; it shows the sewers then in operation, and those which were then projected.

1381. *Chairman.*] There is the district including North-street, Chesterfield-street, with several small streets coming into it, and Samuel-street, James-street, Richard-street, William-street, Rosetta-street, Anchor-street, and Edward-street, all of which appear to be streets through a populous district, and where there are no sewers laid down?—There are a great many houses of a very poor description; I am not aware of any sewer at present; the probability is, that it is drained by the owner of the houses, but I cannot speak to that.

1382. With respect to the district of Queen-street, between which and the river is London-street, which runs at right angles to it, and comes down from Rose-lane to the river; is there any sewer?—There is not; but probably those are the cases in which the owners have made drains to drain their own property, with which I am not acquainted.

1383. What population is there in the district over which your power extends?—I cannot state it this moment.

1384. Have the population and buildings extended, in the district over which your commission reaches, within the last 10 or 12 years?—I should think they have, very much.

1385. There is a considerable increase to the population throughout that district, and a number of new streets and additional houses?—Yes, generally, I should say that the buildings and population have increased; but I cannot say particularly.

1386. The population are in general of the humbler class?—In a great measure.

1387. Supposing the street is filled with those poorer sort of houses, in which a number of those people dwell, if steps are taken for the purpose of affording them any sewerage, is that done by means of your commission taking any steps, or by application of the landlord or the inhabitants?—It is usually done by application of the landlord or the inhabitants; where there are cases of a very extreme nature the Commissioners are the moving parties in the first instance.

1388. By a case of an extreme nature, do you mean where it is a case of extreme emergency from the health of the district being affected, or a large increase of population?—A large increase, in point of population.

1389. It does not appear that one of the causes for the Commissioners moving in the matter is a pressing emergency, arising from the health of the district being affected, but only an increase in the buildings?—The whole matter is taken into their consideration.

1390. They do not therefore usually, and in ordinary cases, set about to consult upon the constructing of sewers for new places unless there is application made by the owners and inhabitants?—Yes; all the new sewers laid down in that year were at the suggestion of the surveyor, they directed the surveyor to make his report, and upon that report they were undertaken.

1391. A good many of them appear to be in districts where there are old houses?—Yes, in some instances; but not always.

1392. You were understood to say, that usually the moving cause for new sewers is the application of the landlords and inhabitants, but that in some cases the Commissioners began where there was an extensive series of buildings?—Yes, that is the case.

1393. Do the landlords of those smaller districts, and the owners of those smaller houses, built in rows and inhabited by the humbler classes, apply to you for sewers to be brought up to their districts, or do they not?—Sometimes they do, sometimes they do not.

1394. If a sewer is brought up into their district are they obliged to pay the sewer's-rate?—Yes.

1395. Do they pay in all cases?—They pay in all cases where they are benefited by the sewers.

1396. You hold them liable in all cases where they avoid a damage, do not you?—I was asked that question on a former Committee; they are, I conceive,

Mr. *J. W. Unwin.*

1 April 1840.

liable where any benefit is derived; the benefit of actually communicating applies to very few parties.

1397. You consider that they are liable to pay if they avoid a damage?—Yes, or receive a benefit.

1398. And that you conceive to be the case if they have the means of passing off water which would otherwise be pounded?—Yes.

1399. Do the landlords of the populous districts, in which there are streets inhabited by a number of these poorer classes, pay to the sewer-rates whether the sewerage comes up that street or not?—Certainly; if they have any benefit whatever they pay for it.

1400. Mr. *Tufnell.*] Do you know what proportion there is exempt from the sewer-rate in your district?—There is a very small proportion of our district exempt; the water runs off from that part into the parish of Tottenham.

1401. *Chairman.*] The denomination you gave in the beginning, namely, levels, implies that all within the level deriving a benefit contribute to the sewers which drain that level?—They do so.

1402. Do the owners of those houses within any one level, where there is no sewer up their street, pay equally per cent. with the inhabitants of the street up which the sewer comes?—Certainly; they are all equal in amount on each level; there is no graduated rate, if that is what is meant by the question; an unequal rate would become unlawful, because unequal.

1403. Supposing there are two streets, up one of which a sewer runs, and up another, of which no sewer runs, the owners of the houses pay equally in each case?—They do.

1404. Do you think they derive an equal benefit in the one case and the other?—Decidedly they do, unless there are private communications with the houses.

1405. Do you mean to say that the owner of a house in a street up which a sewer does not run, and which may be half a mile from a sewer, derives as much benefit from the sewers as the inhabitant of the street up which a sewer runs between the houses?—I should say most decidedly; they derive one and the same benefit from the sewer, unless they have private communications; there is the surplus drainage.

1406. With respect to the power you have, supposing you carry a sewer up any of those densely-peopled streets, have you any power now of enforcing a communication from the houses with the sewer which is made?—Certainly not.

1407. Are there, in your knowledge, many houses there of the poorer class which have a sewer near them, where they might take advantage of your sewers, and might communicate with them, but who do not?—There are a great many; I would instance the case of Rosemary-lane.

1408. Is that the case in many other instances within the district?—In a great many instances they do not take advantage where the sewer is actually coming by them.

1409. The surface water does flow through the channels, and so on; and so far they have an advantage?—Yes.

1410. Are you acquainted with any district in which the health of a particular locality has been improved by your making underground communications?—I cannot answer that question.

1411. Are you aware that there are several districts in which great neglect of cleanliness prevails in the houses which have one of your sewers near them, which might have a great influence?—I am afraid I cannot answer that question.

1412. Do the landlords of many of those dwellings take advantage of those sewers when they come near them?—Sometimes they do, and in some instances I am afraid they do not.

1413. Have you any power to prevent receptacles of filth being sunk below the level of your sewer?—Certainly not.

1414. Do you know of any instances where they are so sunk?—I do not.

1415. What is the amount of the sewer-rate, in Spitalfields for instance?—Ninepence in the pound on the rack rent.

1416. Is that per annum?—No, made as occasion requires.

1417. Can you state what is the average annual amount?—Speaking from conjecture

conjecture, I should say about 1 ½ *d.* in the pound per annum on the rack rent is paid for the sewer-rate.

1418. Mr. *Patten.*] Do you know the proportion that bears to the sewer-rates in other parts of the metropolis?—I do not.

1419. *Chairman.*] Is the amount in your several levels about the same as that of Spitalfields?—I think it is about the same.

1420. In your opinion, from your extensive knowledge of the subject, do you consider that the Commissioners of Sewers in that district have sufficient powers for the purpose of carrying out the sewerage and drainage of this populous district, or are there any additions to their powers which you think they should have?—I think there are some amendments of their powers which might be suggested, but I am not prepared to go into that at present; I should instance one, no rates being made without the presentment of a jury, that was all very well in the reign of Henry the Eighth, but does not apply now.

1421. Mr. *Tufnell.*] You say you make sewers on the application of landlords and inhabitants, are you generally able to accede to the applications which are made?—Yes, almost always.

1422. It is not from the fear of increasing the rates you are obliged to refuse them?—No; we find no difficulty in getting in our rates.

1423. *Chairman.*] When a new sewer is made on the application of proprietors or inhabitants, the proprietors bear a proportion of the expense, do they not?—Not always; sometimes they do, sometimes they do not.

1424. On what principle do you decide?—Each case is decided on its own merits; we usually have about one-third from the landlords.

1425. Do the Commissioners decide upon that?—Yes; it is a matter of private arrangement.

1426. The Commissioners have the power of refusing unless the land-owner comes into their terms?—It is very seldom that the Commissioners refuse to construct a sewer where they think it will be beneficial.

1427. But where they do construct a sewer, a portion of the expense is required of the landlords?—Yes, under the circumstances I have mentioned.

1428. The amount collected in 1831, according to the account which you put in in 1834, was 27,000 *l.* in those seven levels; can you state, distinguishing year by year, what the amount has been in the several years since 1831?—Yes; there have been rates made in 1834 and 1838; an account shall be made out.

1429. Do you know a place called Johnson's Change?—I do not.

1430. Do you recollect some time ago a cesspool overflowing in one of those courts, and its contents being allowed to remain upon the surface several weeks, and a fever being generated in consequence?—I have no recollection of the circumstance.

1431. Do you know Campden-gardens?—No, I do not.

1432. Do you know Punderson's-gardens?—I know it only by name.

1433. Do you know Hare-street-fields?—I do; that is not very densely populated; there are a number of houses, but very few persons living in them.

1434. Do you know that in wet weather a large portion of that neighbourhood is completely inundated; that in all the houses forming the square, and in the neighbouring streets, fever is constantly breaking out, and that the character of the fever in the neighbourhood has lately been very malignant?—I never heard that before.

1435. Then if that has occurred in the midst of your district it is a matter you never heard of?—Just so.

1436. Do you know Baker's Arms-alley?—That is in the parish of Hackney; that is in our district; but it is a very open place.

1437. If it is the fact that there is a narrow court with a dead wall about two yards from the houses, as high as the houses; that the principal court is intersected by other courts extremely narrow, in which it is scarcely possible for air to penetrate close to the dead wall; that between the wall and the houses there is a gutter, in which is always present a quantity of stagnant fluid full of all sorts of putrefying matter, the effluvia from which are most offensive, and the sense of closeness extreme; that all the houses are dark, gloomy, and extremely filthy; that at the top of the innermost courts are the privies, which are open and uncovered, the soil of which is seldom removed, and the stench of which is abominable; you have not heard of that?—No, I have not heard of any of those

Mr. *J. W. Unwin.*

1 April 1840.

those circumstances; I have heard of very few complaints of fever in the Tower Hamlets.

1438. Have you ever seen "Reports on the Sanitary State of the Labouring Classes, as affected chiefly by the situation and construction of their Dwellings, in and about the Metropolis. Extracted from the 4th and 5th Annual Reports of the Poor Law Commissioners"?—Never.

1439. Have you ever seen the report of Dr. Arnott, Dr. Kay, Dr. Southwood Smith, and a number of other medical men, particularly with reference to the district referred to?—Yes, I have seen that; and I think I read that portion with regard to our district.

1440. Do not you recollect that there are most fearful accounts of fever prevailing in that district?—No; I had a report sent to me, which I understood came from Dr. Southwood Smith, and there was a communication I think from the Secretary of State upon it.

1441. Mr. *Tufnell.*] You state that you are able to comply with every application made to you for sewers?—As far as the funds go.

1442. Then in the opinion of the Commissioners this district is sufficiently drained?—No; the Commissioners are improving it constantly.

1443. But there is not a great deficiency in their opinion?—I think so.

1444. Has there been any representation made by medical men of the sufferings of the poorer classes in that district?—No; we never had any communication from any medical man on the subject.

1445. Nor from any board of guardians?—I think, a short time ago, there was a complaint by the guardians of the Stepney Union respecting a sewer requiring arching, but I am not aware of any other.

1446. Has that been complied with?—It is under consideration now; there is a difficulty in arching it.

1447. Are there any works now in contemplation?—There are some going on, particularly that in Rosemary-lane.

1448. Mr. *Patten.*] Are improvements constantly going on?—Yes, for the last ten years; I can show the amount of additional drainage done within the last ten years, showing the number of feet of sewerage constructed year by year.

1449. Mr. *Tufnell.*] You say that those only benefited by the sewers are rated to them, is it a difficult point to ascertain whether parties are benefited by them or not?—There is now and then a doubt; we had a case at Upper Clapton, in which a man conceived that because he resided 27 feet above the sewer he was not benefited; it was tried in the Court of Common Pleas, and we succeeded.

1450. Mr. *Patten.*] You have the right of rating every one; the only remedy against that is by action at law?—Yes, that is the case as to all rates.

1451. *Chairman.*] There is no check upon you as to the amount of the rate?—No; I apprehend that is the case with all rates.

1452. Mr. *Tufnell.*—Has this division of the levels long existed?—Yes; it is the most unfortunate part of our system. I was going to say up to the year 1829 we attempted to make one general rate on the whole of the Tower Hamlets, and we found it much more beneficial, but the Court of King's Bench quashed the rate, and we have since been obliged to divide it into levels.

1453. Under what Act is that?—The 28th of Henry 8th, c. 5.

1454. There is no local Act for the Tower Hamlets?—No.

1455. Have you any power of making a general rate without another Act?—No; that power is extremely desirable, I think.

1456. Has it been in contemplation to apply for that power?—Yes, but no steps have been taken.

1457. What is the number of the Commissioners?—About 150. We have 120 Commissioners who have qualified; a great many, all the larger rate-payers, attend, and take part in the business of the court.

1458. What is the average attendance?—I should say, from 30 to 40 at a court.

1459. Mr. *Cowper.*] In what does the inconvenience of the divisions into levels consist?—It is so difficult in densely-populated districts to say to which level the house ought to be rated. There are some streets in two or three levels; I can instance the case of Prescott-street, I think the one end is in Nightingale-lane level and the other in Tower-hill level, and that produces a difference in the rates, and an unpleasant feeling in the inhabitants.

1460. Have

Mr. *J. W. Unwin.*
1 April 1840.

1460. Have you, under your present system, a larger establishment of collectors, and so on, than you should have if it were put together?—No, I think not; but the detailed part of the business is more complicated, and we found it more convenient to have one rate; but after the decision of the Court of King's Bench we could not.

1461. Mr. *Tufnell.*] Is there any great difference in the rates of the different levels?—Only in the parish of Hackney; there they have a great deal of open ground, and there are no arched drains as there are in the others.

1462. *Chairman.*] Is there any system of inspection by agents employed by your commission, or in any other way, to see that the sewers are kept in order?—There are inspectors, out-door officers, whose business it is to attend to them; and there is a quarterly inspection made of all the open sewers, and a report made to the Commissioners.

1463. Mr. *Patten.*] Does the tide rise in any of your drains?—Yes; it is kept out by trap-doors.

1464. Does the tide come up a considerable distance?—Yes, if it were let in it would; it sometimes happens that pieces of wood prevent the trap from shutting down, and then the tide gets in and goes a good way up.

1465. Have you observed the effect of that on the general drainage?—No; the surveyor can speak to that more clearly.

1466. *Chairman.*] You state, that it is the duty of some persons to report quarterly the state of the sewers and open drainage?—Yes.

1467. Is it their duty to report any evils arising from the open drains to the health of the inhabitants?—No, merely their carrying off the water; but the Commissioners themselves are resident in the district.

1468. Are the inspectors builders, or of what class of persons?—Generally, I believe, they are carpenters, working men, superior labourers.

1469. They are in the employment of the Commissioners?—Yes.

Mr. *Beriah Drew*, called in; and Examined.

Mr. *Beriah Drew.*

1470. *Chairman.*] OF what district of the sewers are you clerk?—The Surrey and Kent; from the Ravensborne to the Mole.

1471. Does that comprise all on the southern side of the river?—Yes, it does.

1472. The commission of sewers with which you are connected comprises the trust for all Southwark, Lambeth, Rotherhithe, Deptford, and all that populous district?—Yes.

1473. Do you apprehend the powers of the Commissioners to be such as have been stated by the last witness?—We have larger powers; we have a local Act, which gives us power over private drainage. There are frequent complaints by parties which regard to private drains, which are used by a number of occupiers of property, on which complaints the aid of the Commissioners is sought, for the purpose of making them do that which they ought: that is exercised by the Commissioners under the local Act of Parliament only, not under their general powers.

1474. Mr. *Walker.*] What is the date of the Act?—There are three Acts.

1475. *Chairman.*] They appear to have been in 1809, in 1810, and 1813?—Yes.

1476. Your commission extends from the River Ravensborne, in Kent, to the Ember branch of the River Mole, in Surrey, and the district is designated the Sewers of Surrey and Kent?—Yes.

1477. In your district there are comprised the parishes of Deptford and Rotherhithe, Bermondsey and Newington, the Borough of Southwark and parts of Lambeth, Camberwell, Battersea, and Clapham?—Some of those are parts of parishes—part of Battersea, part of Clapham; that is what is called the rateable district.

1478. It is a very populous district, and there are vast numbers of the working classes and poorer inhabitants dwelling within it?—A great number.

1479. Supposing new buildings take place within that district (buildings of streets and habitations for the working classes), do the Commissioners consider that they have the power, or do they exercise the power, of carrying sewers up streets of that nature without application from the landlords or inhabitants, or do they provide for those habitations?—They certainly wait for applications, conceiving

Mr. *Beriah Drew.*

1 April 1840.

conceiving it to be as much the duty of the land-owner to make drains as to build houses.

1480. Suppose applications are made, on what terms do the Commissioners of the Sewers carry up the sewers there?—In some instances contributing a portion, and in other instances not contributing at all.

1481. If the land-owners or the owners of those houses make no application to the Commissioners of Sewers, do they conceive it their duty to act without such application?—There may be instances, but not generally: they generally wait for an application; they think generally it would not be right for them, with public money, to improve the property of private individuals.

1482. Are there not within your district many streets with small houses abutting upon them, and inhabited by considerable numbers of the working classes, in which there has been no application made by the owners?—Yes, the greater number.

1483. And in which, in consequence, there have been no sewers made?—No public sewers; the Commissioners have no power to call upon the landlords to make sewers.

1484. Are there many districts, such as those described, in which there are no sewers, and in which great evil arises from the want of some sewerage, and some additional power for making them?—I cannot say, of my own knowledge, that I am aware of any; we have no complaint of that kind, with the exception of the arching of a sewer, which was made to us recently by the guardians of the poor of Christchurch: that was for the arching of an existing sewer.

1485. You have not heard of any other complaints?—No.

1486. Suppose a sewer is carried up into one of those streets, have you any power to oblige the owners of those houses or the inhabitants to communicate under ground with the sewers?—We have no such power.

1487. Are there many cases in which, though your sewer does go up one of those populous streets, the houses do not communicate with the sewer?—A great number; but still I would observe, the parties obtain a considerable benefit by the sewer going up there; all the tract in question is under high-water mark, in consequence of which it is important to drain the land.

1488. It is a general advantage derived, but not the same particular advantage as if there were communications by under-drains from each house?—Not generally speaking.

1489. Are there many districts with which you are concerned in which there is no communication by under-drains with the sewer?—There are a great many sewers to which there are no underground drains.

1490. It is a surface drainage only?—Yes, I should think so; but that is not a point which comes so much under my notice as that of the surveyor.

1491. Have you any power to prevent cesspools or receptacles for filth being made below the level of your sewers?—Not any.

1492. With respect to the covering over of open sewers in your district, it has been stated to the Committee, that from some being left open the odour from the stench is the cause of illness, are you aware of such being the case in the vicinity of many districts where there are a considerable number of houses?—No, I am not aware of any particular case, though the arching of sewers must be beneficial to the health of the neighbourhood, I should conceive.

1493. No complaints have been made to you with respect to the necessity of covering several open sewers, on the ground that the stench and the smell were unhealthy?—There have been several complaints of that kind, but they are by no means numerous; we have miles and miles of open sewerage, some of them in a very populous district, but we are in a large manufacturing district; the tanners and leather-dressers, and so on, live in our district.

1494. What is the amount of the sewer-rate levied, as nearly as you can state it?—Something under 6 *d.* in the pound; perhaps 5 *d.*

1495. That would be on the rack rent?—Yes.

1496. Taking one year with another?—Yes.

1497. Have there been considerable improvements made of late years?—Very considerable.

1498. Will you make a return of the number of yards of additional sewerage which have been made each year within 10 years?—Yes, I will do so.

1499. Is the rate made on the same principle as in other districts, that all who

who receive the advantage pay?—Yes; but we have succeeded in getting rid of the levels, which was extremely inconvenient; it is in two parts now.

1500. Are the accounts kept separately for the two?—Yes.

1501. Does all the property within your district pay at the same rate for sewerage?—Yes.

1502. Houses that are immediately adjacent to one of your sewers, and could easily communicate by means of an underground drain, pay the same as those at a considerable distance, and which could not communicate without difficulty?—Yes.

1503. Mr. *Walker.*] Did you state that Clapham was in your district?—A very small part; that which lies down on the low level in the Wandsworth-road.

1504. The rural village of Clapham does not pay to your district?—No.

1505. Mr. *Tufnell.*] Have you any plan with you?—No, I have not; our district runs from Deptford to beyond Richmond in Surrey.

1506. *Chairman.*] Do you recollect an application being made to you respecting a sewer in East-street, Lambeth-walk, and several other streets leading into it; Saunders-street, John-street East and West, Frances-court, and Fountain-court, and a statement made that a fever prevailed in that district; and that improvement was requisite by a sewer being carried up?—No, I do not.

1507. It appears to have been made to the guardians of the poor, and a communication made by them to your Board?—I do not recollect the fact; I know of it from the circumstance of having some conversation upon it with Dr. Kay some time ago.

1508. Has any sewer been made along that district?—Up Lambeth-walk I know there is; but I would rather refer that to the surveyor.

1509. Mr. *Cowper.*] Do you remember any representations having been made by any Board of Guardians on the subject?—I think only one, and that was Camberwell.

1510. Any by any medical person?—No.

1511. Nor any complaint made of any inconvenience from a general want of sewerage within your district?—No, not of a general want of sewerage.

1512. Mr. *Tufnell.*] Do you remember a memorial presented to the Commissioners of Sewers from the guardians of the parish of Camberwell, in the year 1838?—I do.

1513. Is that just shown you that report?—I believe it is.

1514. Was anything done in consequence of that memorial?—The subject of the drainage of Camberwell was then under the consideration of the Commissioners; since that a line of sewerage has been formed under the public road from Camberwell-green to Walworth.

1515. As far as you remember, is that the only representation which has been made by the Board of Guardians?—With the exception of the arching at Christchurch, to which I referred before.

1516. Do you know whether the Boards of Guardians consider it part of their duty to represent the defective state of sewerage?—I do not know.

1517. *Chairman.*] The Commissioners have no power of enforcing a communication between the houses and the sewers?—Not at all.

1518. Do you not conceive some such power would be very advantageous?—I do indeed.

1519. Do you not think the want of some such power renders inefficient, in many instances, the advantage to be derived from your sewers?—I think so.

1520. It rests now entirely with the opinion or the will of the owner, or the occupiers?—Entirely.

1521. There is no general power of enforcing a communication between the houses or rows of houses with the sewer?—No.

1522. Mr. *Tufnell.*] You afford every encouragement to such communication?—Yes; the quantity of sewerage we have made within the last few years has given very great opportunity of doing that which did not exist in the old sewerage, a deeper sewerage having been made under the power of the local Acts of Parliament.

1523. Does there appear a great desire on the part of the lower classes to avail themselves of the sewer?—The lower classes have very little to do with it.

1524. Is there a desire to avail themselves of it on the part of landlords?—I am sorry to say not.

Mr. *Beriah Drew.*

1 April 1840.

1525. *Chairman.*] Do not the landlords of houses occupied by the lower classes do as little as possible for them in this way?—I am afraid it is so.

1526. In proportion as they are inhabited by the poorest and most destitute, has not the neglect of these houses by the landlord been generally greater?—In some districts it is so, certainly.

1527. Mr. *Tufnell.*] Have you not a power of inflicting a fine on any person who communicates with the sewer without your consent?—Yes.

1528. Is that ever exercised?—Yes.

1529. Under what circumstances?—For damaging the sewer.

1530. *Chairman.*] When they express an intention of communicating with the sewer, do you object to it?—We object to their doing it, we do it for them.

1531. What do you charge them?—We charge the expense; it depends upon the level; some of our sewers are 12 or 14 feet down; the cost of getting at them is greater in proportion.

1532. Mr. *Cowper.*] If a proprietor of a house wishes to communicate with the common sewer, he must do it at his own expense?—Certainly.

1533. Mr. *Tufnell.*] There are regulations with respect to the mode of communicating with the sewers?—The individual has no power of breaking up the street or a public pathway; the Commissioners of Sewers have that power; whenever an application is made to them, they direct the surveyor to estimate all that which lies under the public way, the opening the sewer and so on, and that expense is paid to the Commissioners, but the Commissioners no further interfere; they do that to assist the individual.

1534. Have you a regulation as to the nature of the expense?—It depends upon the circumstances.

1535. *Chairman.*] Is there any regular system of inspection as to the state of the sewers and the other drains?—There is a quarterly report by the surveyors.

1536. How many surveyors are there in this district?—Three for the whole district.

1537. Is it their business to make a quarterly report of the particular portions of the district which fall under their view?—Yes; and to direct the labour of the workmen.

1538. Is the system of inspection regular?—Yes.

1539. That inspection goes to the state of the sewers, and the prevention of anything impeding them?—Yes.

1540. It goes to the open drains as well as the sewers?—Yes.

1541. Is it their duty to report on the state of the sewers or open drains affecting the health of the inhabitants?—I should conceive not.

1542. Do they in fact do so?—I am not aware of any instance in which they have done that; occasionally, there are instances in which they say it is a nuisance to the neighbourhood, and therefore they pray the Commissioners to consider it in that light.

1543. It is not considered as a part of their duty?—No.

1544. Mr. *Cowper.*] Do you consider that there are any additional powers required by the Commissioners of Sewers for the performance of their duty?—I think in a populous district like ours there are many suggestions which might be made upon that subject, but I am not at all prepared to go into that; I think I suggested before the former Committee the power of calling upon the owners of land to arch over drains, the Commissioners of Sewers paying a proportion of the expense.

1545. Mr. *Tufnell.*] When it is in contemplation to build any new streets for the lower classes, is it the duty of any person to report on the expediency of making a drain through those streets?—No.

1546. That rests altogether with the speculators?—Yes, entirely.

1547. Mr. *Cowper.*] Under any circumstances would the Commissioners of Sewers think themselves justified in laying down new drains after the new streets had been finished?—If it was to improve the neighbourhood, but not for the improvement of those houses only; if the owners of such row of houses were to come forward and say, "it will improve the neighbourhood, and I am willing to contribute towards the expense of doing it," it would be done, but not solely for the benefit of those houses.

Mr. *William Baker*, jun. called in; and Examined.

1548. *Chairman.*] YOU are Clerk to the Commissioners of Sewers for the Poplar district?—I am.

1549. You were examined before the Committee in 1834?—I was.

1550. Your district differs from several other districts, for you state that it is more a question of the drainage of a marsh than the sewerage of a city?—Yes; we are now apparently in a state of transition from a marsh to a manufacturing district; there are extensive manufactories being established that probably will lead to an increased population. At present there are not many houses for the residence of labourers.

1551. If there should be an increase of buildings, it will be necessary to have an increase of drainage; will not it?—Not an increase; I apprehend there are abundance of sewers; what we wish to do is, to simplify the drainage; to improve the drainage; we are from time to time making very important substitutions.

1552. Are those on the old line of sewers?—Yes.

1553. You assess all who are benefited by surface drainage?—Yes; almost the whole of our district is below the level of the river.

1554. It is done by means of sluices?—Yes.

1555. What is the amount of the sewer's-rate on the average?—About 2*d.* in the pound, not on a strictly rack rent; it is something less than the rack rental; possibly approaching nearer to 1¾*d.* in the pound; we have a 6*d.* rate once in three years on the rental; not strictly a rack rental.

1556. The population is increasing, you say?—Yes.

1557. Is Limehouse within your district?—A small portion of Limehouse.

1558. What is the condition of Limehouse?—It has been improved within the last few years; a sewer has been arched over near Park-street, which was a considerable improvement.

1559. Are there not some improvements of that nature still required?—Not in that part of Limehouse which is within our division; a part of the parish is in the Tower Hamlets; there are undoubtedly plenty of sewers within our commission which would be benefited by being arched over.

1560. Do you consider that you have the same powers, and no more, than the same powers spoken of in the other district. Suppose there were new houses or buildings erected within your district, do you wait for the application of the owner of the houses before you make a sewer up into that district, or do your Commissioners commence it on their own discretion?—We have had no streets made; we have had detached buildings and houses; generally speaking, I agree in Mr. Unwin's general description of the principles applicable to us.

1561. Suppose a sewer made by the Commissioners up a street inhabited by the poorer classes, have you the means of enforcing a communication by means of drainage through your sewer, or not?—Certainly there are no means of enforcing it.

1562. Would it not be highly beneficial to the health of the inhabitants that you should have the power?—I think it would; but we have heard no complaints on that subject.

1563. If there have been any cases of fever and illness to the poorer classes, arising from such causes within your district, you are not cognizant of them?—No; but I think the district is so limited they could not have occurred without my knowledge.

1564. Mr. *Tufnell.*] Have you a plan of your district?—I have.—[*Producing the same.*]

1565. There is no distinction made in the plan between the old and the new sewers?—No; upon the occasion of forming the West India Dock timber pond it was considered desirable to substitute a new main sewer for the old one, on the south side of the timber pond, in a direct line from the east end of Alfred-street to the outlet at Blackwall; that was a substitution for the pre-existing sewer.

1566. Is this an open sewer?—The sewer called the Great Field Sewer is open; we have had frequent applications of late by parties to arch over the sewer or ditch which bounds the Ferry-road.

1567. Many of those are merely field drains?—Yes; there are no houses at all near them.

1568. *Chairman.*] You have not the power of obliging the inhabitants to

Mr. *W. Baker*, jun.
1 April 1840.

communicate with the sewers?—No; the Commissioners gladly avail themselves of every opportunity they have of improving the drainage, and also of arching over the old sewers.

1569. Mr. *Tufnell.*] What is the number of your Commissioners of Sewers?—I think about 60.

1570. *Chairman.*] Is Limehouse in your district?—A small portion of Limehouse is.

1571. Is not there a sewer partially covered, here and there, running all the way from Shoreditch?—That is within the Tower Hamlets commission; that comes close to the confines of our district.

1572. That passes through a densely populated district, does not it?—I am not able to speak to that, not being within our district; the district is populous in some parts of it, not in all.

1573. Mr. *Tufnell.*] Do you know the population of your district?—No, for it comprises a portion of two parishes; the population is very small. Perhaps I ought to add, that the two-pence in the pound rating I have described embraces the expense for keeping up a great portion of the embankment to keep out the water. I beg to say we have never received any complaints from any boards of guardians or medical authorities.

1574. *Chairman.*] Did not the cholera break out in your parish at first?—I believe it did; in the parish of Limehouse, in which I reside.

1575. Mr. *Tufnell.*] Are any new sewers intended near the Ferry-road?—At present the sewer runs by the side of the road, and is a boundary to it; but we are endeavouring to have that sewer as far as possible carried down the road, instead of by the side of the road.

1576. Is it considered that there is any deficiency of drainage in your district?—No, I think there are abundance of open sewers and drainage; the object is to simplify it, and to arch over any where houses are built.

1577. Not to extend the line of drainage?—No; in consequence of the appearance of a sewer in Limehouse, a strong representation was made to the Commissioners of the Tower Hamlets, and they arched over the sewer which was considered to be so objectionable.

1578. *Chairman.*] It is stated to this Committee that in Limehouse, in Church-row, there is a private drain running in front of the houses; that the drain has not been opened for 20 years, and that they cannot get the inhabitants in one mind to get it cleansed; have you any power to enforce the cleansing of that drain?—Certainly not.

1579. If the inhabitants of the row in such a case were, one to cleanse before one house and another another, there is no power to compel them to do it simultaneously?—No.

1580. Would not such a power be very beneficial to the health of the neighbourhood?—A power to enforce the simultaneous cleansing of sewers would be one of the most important powers the Commissioners can possess, and remove that which is now felt to be a great source of inconvenience.

1581. Is not some such power requisite?—We have felt very much the want of such power; the proceedings of the Commissioners have been greatly embarrassed in consequence of not having such a power.

Mr. *Joseph Ellison*, called in; and Examined.

Mr. *J. Ellison.*

1582. *Chairman.*] DO you reside near Bradford, in the West Riding of Yorkshire?—I do.

1583. Bradford is a very populous town, where the occupations of persons are a good deal connected with the stuff and woollen trade?—Just so.

1584. In the year 1831 the population of the parish appears to have been 71,000; is the parish very populous round the town?—Yes.

1585. Has there been a great increase within the last nine years?—There has been a very considerable increase; I should think the per centage will be greater since 1831 than it was between 1821 and 1831.

1586. If the increase has been at the rate of one-third in those 10 years, then the population would amount to almost 100,000?—I have no doubt it will.

1587. Is there a very great proportion of those consisting of workmen, artisans, and persons who get their bread by labour?—The majority of the population

population consists of workmen and labourers that have to earn their own subsistence by their labour.

1588. Is there a very considerable increase in the suburbs of this town and round it of houses for the class of persons you describe?—A very considerable increase.

1589. What is the state of this populous and increasing town, with respect to drainage, sewerage, cleansing, and the clearing of nuisances away from the houses of the poorer inhabitants?—There is no public drainage or sewerage at all; every thing which is done is done by private individuals, therefore I am sorry to say the sewerage is extremely defective; in fact, I may say there is no sewerage at all.

1590. Do you mean that in this populous town they have no general system of sewerage and drainage to carry off the filth and wet, and so forth, from the houses of the inhabitants?—I do mean to say that.

1591. In consequence of that is the sewerage and drainage very much neglected and very imperfect?—Very much so, indeed.

1592. Do you not think that such neglect and want of system is very injurious to the health of the inhabitants?—I am quite sure of it; that opinion has been repeatedly expressed by the medical men of the town and the neighbourhood, and by the parish authorities; it is a general complaint.

1593. Is it to your knowledge the opinion of the medical men, that fevers and other disorders arise from such neglect?—It is within my knowledge; I am very sorry to say that typhus fever prevails at the present moment in Bradford and the suburbs, and the medical men give it as their opinion that it is mainly owing to the defective state of the drainage and sewerage.

1594. With respect to the cleansing and carrying away offal and filth, and preventing their accumulation in the close courts and narrow alleys in which many of the humbler classes reside, is that carried into effect in the town of Bradford?—It is attended to only in what is called the township of Bradford, which comprises only a very small portion of the town, for the parish within 20 or 25 years has spread out on every side into the township of Bowling, the township of Horton, and the township of Manningham, and there is no power there to regulate as to offal or manure, or anything of that kind.

1595. Is that in consequence very much neglected?—Very much neglected indeed.

1596. Is that, in your opinion, injurious to the health of the inhabitants?—There can be no doubt of that.

1597. And to their comfort, and cleanliness, and decent appearance?—Certainly.

1598. What is the state of the paving of the courts and alleys, is that attended to, and are there means for the water to go off, or does it lie in puddles mixed with refuse in a stagnant state?—That is attended to within the township of Bradford, but it is not attended to at all in the suburbs, which are by far the largest portion of the town. I will explain the way in which the suburbs have sprung up: an individual who may have a couple of thousand pounds, does not exactly know what to do with it, having no occasion for it in trade; he wishes to lay it out so as to pay him the best per centage in money; he will purchase a plot of ground, an acre or half an acre; then what he thinks about is, to place as many houses on this acre of ground as he possibly can, without reference to drainage or anything, except that which will pay him a good per centage for his money; that is the way in which the principal part of the suburbs of Bradford has sprung up; cottages have been built by speculators with that view, and with that view only, to pay a good per-centage on the money laid out.

1599. The owners get as much out of the people who are tenants, and give them as little as they can?—Exactly so.

1600. There is no system of paving, or cleansing, or sewerage carried on?—None at all.

1601. Is there any regulation as to building in such a way as to leave open spaces for the air to pass through, or prevent courts being built without a current of air being enabled to pass along to the end, or their not being built back to back?—None whatever.

1602. Are they neglected in those respects?—Very much.

1603. Would not some regulation for the purpose of guarding against the evils

Mr. *J. Ellison.*

1 April 1840.

evils referred to, be of some importance to the health of the inhabitants?—I think so, for Bradford may be taken as a fair sample of many towns which have sprung up within the last 20 years; I do not think any local Act will be able to compete with the evil, I think it must be a general Act.

1604. Some general power to enforce drainage and cleanliness and sanitary regulations, you think absolutely necessary?—Absolutely.

1605. You feel that they are requisite in this town with which you are acquainted?—Yes; it is a matter of daily complaint among all parties.

1606. Are there many houses built back to back, and without the means of ventilation?—Yes; they are built in fact without any general plan; the only principle that actuates the builder is to make the buildings pay as large a per centage as possible.

1607. In consequence of these defects you think the health of the inhabitants is much injured?—There can be no question about that at all.

1608. In consequence of their health being injured, are not the poor-rates increased?—The poor-rates have increased very much lately.

1609. Wherever the head of a poor family is carried off by fever or other complaint, are not his family thrown for partial relief on the poor-rates?—Undoubtedly they are; I am guardian of the poor, and have heard hundreds of applications made where they have applied on that very ground.

1610. Do not you think regulations, such as have been referred to, would be the occasion of saving to the parishes?—Certainly.

1611. Therefore, even in an economical point of view, they would be advantageous?—Yes; it would be advantageous even as a matter of expense.

1612. Mr. *Tufnell.*] The expense of making sewers would, in your opinion, be less than the expense on the parish on account of the bad state of the town?—I mean to say, that eventually it would occasion a saving.

1613. *Chairman.*] Suppose a new suburb springs up, as these have done, do not you think the most economical mode would be to have some system laid down by which due regulations should be made for building, for drainage, for sewerage, and for cleansing, and that some such regulations would repay the proprietors as well as all persons concerned, and also the parish, by means of the saving which would accrue?—I do think so.

1614. Mr. *Tufnell.*] Are you aware of the expense of drainage?—Yes, I believe I am; the expense of sewerage and draining at Bradford would be very trifling; I do not know any town that might be more thoroughly drained than Bradford at less cost; there is a valley runs through the centre of it, and there is a rivulet runs through the centre; the town rises, upon each side there is an inclined plane rising very rapidly; they might drain it into this natural sewer at very little cost.

1615. You are aware that the question refers to underground drainage?—Yes, it will equally apply, and more indeed, for that will decrease the expense; there is no occasion to make it so wide.

1616. *Chairman.*] The expense of drainage or sewerage would be much less in cases where a suburb or new buildings were laid down on a plan, and sewers laid down by regulations beforehand, than if they were applied subsequently to a town built before?—Much less, no doubt, and they would be much better done.

1617. It is therefore important that some rule should be laid down?—Yes; I am sure that nothing would give more satisfaction, generally, to the large towns than a measure of that kind; they have been crying out for it these many years, but what is everybody's business is nobody's, and therefore they have never applied.

1618. Mr. *Ingham.*] They have never applied for a local Act?—There were a number of commissioners appointed under a local Act some years ago, but the powers they possess are so limited that they are not equal to the powers of a surveyor under the Highway Act, and they consider their powers obsolete, There are 70 commissioners; if a meeting is called there may be half-a-dozen got together, but the door must be locked to keep them in the room; they do not possess the power to take down a single building, or widen a street, or put down a drain.

1619. You are probably aware, that the powers enumerated have been given to

to commissioners in various towns under recent Acts?—No, I am not aware of that.

1620. They have not made application to the Legislature for any improvement of their Act?—No; they have debated the question; they have debated whether they should apply for a charter of incorporation, or for extended powers; but the commissioners at present have no powers equal to those of a surveyor under the Highway Act. I was told by a person conversant with Bradford, before I left home, that the population of Bradford exceeds 120,000.

1621. Mr. *Tufnell.*] Do you know what disorders are most prevalent in Bradford at present?—Typhus has been most prevalent.

1622. Is that on the increase?—It has been on the increase.

1622*. Has it been so more than in proportion to the population?—Yes, I should say even more than in proportion to the population.

1623. Have you any statistical information upon the subject?—I have no returns, but I am as well acquainted with Bradford as most men.

1624. *Chairman.*] Have you heard it stated by medical men that typhus is on the increase there?—Yes.

1625. Have you heard that attributed to want of cleanliness?—Yes; that is considered as the main cause.

1626. Do you not think that the comfort and health of the working classes are very much diminished by their being obliged to reside in such neglected dwellings as those referred to, without cleansing or ventilation?—Yes; and I can say that the working classes there are aware of this, and they very often tell me that they are satisfied there is one law for the rich, and that there is another law for the poor.

1627. Does that arise from the neglect of these things?—That is one cause.

1628. Is there any open ground within a short distance of Bradford, this populous increasing town, in which the people are in the habit of taking exercise and amusing themselves?—There is at present a piece of open ground, about 20 acres; I am certain it is under 30 acres; as far as I can judge I should say it is about 20 acres: this piece of ground is called Fairweather-green; it is within about a mile and a half of Bradford; it is the usual place resorted to by the lower classes; in all their sports they resort thither; it is, in fact, the only place they have, and I am exceedingly sorry to say that there is an Act before the House of Commons for inclosing it.

1629. Will the inclosure of that common you have spoken of be injurious to the comfort, amusement, and exercise of the humbler classes in this large town?—I should say it would be very injurious.

1630. Will it be viewed by them with feelings of dislike?—Very great dislike; I am sure they would make the same remark I have just made if it was allowed to pass into a law, that there is one law for the rich and another for the poor.

1631. Mr. *Ingham.*] Who is the proprietor?—Mr. Lister is the largest proprietor, and there are several others.

1632. Does the town of Bradford lie within the same parish or manor to which this waste belongs?—Yes; it is in the parish of Bradford.

1633. What is the chief occupation of the population of Bradford?—The chief occupation of the working classes is combing wool, a very unwholesome employment; they are obliged to work in their own dwelling-houses; a steam arises from it; they use combs, long iron spikes made very hot, and charcoal to heat those combs; the occupation is exceedingly unwholesome, and I should say, therefore, recreation in the open air was, on that account, much more necessary; and it is the very place those parties resort to; if that place is inclosed there will be no place in the neighbourhood of Bradford to which they can go to take exercise but the open roads.

1634. Mr. *Tufnell.*] Is there any petition from the inhabitants of Bradford against the inclosure of this open ground?—I do not think there is; but there is a very strong feeling against it; Mr. Lister is a very influential man; he has brought in the Bill. The only reserve for the purposes of recreation is three acres for 120,000 souls; it is not large enough for a cricket ground.

1635. What are the games they play at there?—They play at cricket, and a

Mr. *J. Ellison.*

1 April 1840.

game we call spell and nur; they will drive a ball 10, 11, 12, 13 and 14 score; they cannot play at those games in three acres.

1636. *Chairman.*] They are games which require a greater space?—Yes; the ground is exactly suited for this purpose; if it had been set apart for the very purpose, it could not have been more suitable.

1637. Mr. *Ingham.*] Has there been a public meeting of the inhabitants for the purpose of resisting this inclosure?—I do not think there has been; I will state why. This ground has been latterly used by the Chartists, and it has got into bad odour, but I do not think that a good reason for inclosing the ground. I am happy to say, that Chartism is very rapidly dying away, but if the lower orders have not places where they can engage in sports, it is the very thing to drive them to Chartism; there cannot be a better thing than to keep their minds engaged in matters of that kind.

1638. Mr. *Tufnell.*] Is the town well supplied with water?—No; it is not.

1639. *Chairman.*] Is there a company for the purpose of supplying it?—There is a company in embryo, about to apply to Parliament for a Bill to supply the town with water; the only reason they do not apply this Session is, that times are so very bad, they are deferring it till there is an improvement in the trade.

1640. Is the ground referred to, in a situation particularly suitable for building land?—No; I think not.

1641. Mr. *Tufnell.*] You state, that disease among the lower classes has been on the increase; can you refer the Committee to any returns, showing in what ratio it has increased?—No, I do not think I can; I am sure there are no statistics of that kind kept at Bradford, but it is a matter of general notoriety. There is another disease as well as typhus, which is at present exceedingly prevalent in Bradford, which medical men attribute to the same causes, namely, the small-pox; it is very prevalent, not only among infants, but among adults; and latterly, it has carried some people of considerable property and influence off. A lady, lately, died at the age of 40, and the wife of my gunsmith, who was quite well when I saw her one week, was dead the next.

1642. *Chairman.*] Have you heard the medical men state, that they considered it more virulent in consequence of the neglect of these precautions?—That is their opinion.

1643. Mr. *Ingham.*] Is there any part of the population engaged in the iron-works?—In the suburb, in Bowling, a considerable number are engaged in the iron-works.

1644. Mr. *Walker.*] What is the distance from Bradford?—About half a mile; and there are other iron works at Lowmoor, about a mile and a half off.

1645. Do the workmen reside at Lowmoor or Bradford?—They reside mainly in the neighbourhood of the works.

1646. Is this open space you refer to, accessible to the workmen in the iron-works, as well as the people in the town?—It is the very place they go to; it takes in the population for five or six miles round, it is the only place for the purpose in the whole neighbourhood.

1647. Do not you think, that in these depressed times of trade there is a lack of spirit pervading the community?—Yes, there is rather a want of spirit; if the trade had been good, and there had been none of this sort of agitation, such a Bill would not have been brought in as that for the inclosure of this common.

1648. Mr. *Ingham.*] Is not the iron trade thriving?—It is not so good as it has been; the demand for pig-iron, especially, is beginning to slacken; my remark will apply to Lowmoor more than Bowling; the Bowling ironworks are mainly engaged in the manufacture of steam-engines, and they have taken the lead, and I do not think they will very soon slacken.

Joseph Fletcher, Esq. called in; and further Examined.

1649. *Chairman.*] DO you know that the state of the drainage, sewerage, and cleansing is neglected in many large manufacturing towns in which the humbler classes reside, and also in the suburbs of towns?—I have been aware of that from different sources previous to my present occupation,—in connexion with the Hand-loom Inquiry Commission. I was assistant secretary to the Municipal Boundary Commission, which had before it a number of municipal subjects, and was also employed under the Municipal Commission, which investigated the whole municipal system of the kingdom, with some reference to the Commissions under local Acts as well as to the operations of the old corporate system.

1650. You are aware that there is a deficiency of those regulations in many of the large towns?—There is a deficiency both of the powers to be exercised and of proper authorities to exercise them.

1651. Will you be kind enough to point out the deficiencies you consider there are, first of all in the powers, and next, in the authorities requisite for the purpose of putting them into action where they are in existence; first of all, with respect to the powers in places in the neighbourhood of London?—In the metropolis the Committee are aware of the constitution and powers of the various Boards of Sewers. But the municipal system of London, if system it can be called, is exceedingly intricate; the old corporation of the city presides over only about 250,000 inhabitants out of the whole metropolis; their powers are very various; and even in the city of London the sewers are vested in a distinct corporation, and there are several other bodies in the city who have their peculiar portions of municipal administration. Out of the city of London, independently of various Commissions of Sewers, there are municipal bodies of great variety, both in their purposes and in their constitution; these have never been the subject of any investigation, so that I cannot state minutely what they are; but in the borough of Mary-le-bone, for instance, the number of Boards to whom the paving and lighting, and the cleansing of the streets is variously entrusted is quite surprising; and the number of local Acts is not less than 80.

1652. With respect to the power of ventilation, cleansing, and sewerage in the other larger towns, will you have the goodness to state the information you possess?—The powers possessed by the authorities in whom they are vested are exceedingly various; they form no system, and never have formed a system. The old bodies, in whom all municipal powers were vested, were either the corporations of the towns, or the manorial jurisdictions of the country; under some of the manorial jurisdictions have accumulated large manufacturing populations, forming now some of the largest towns in the kingdom; such as Manchester, Birmingham, Bolton, and several of the large towns of Yorkshire. Other towns possessing ancient municipal constitutions have also some of them grown up to be places of immense size, such as Liverpool. Under the recent Act for the Amendment of Municipal Corporations, all those towns which had the old municipal constitutions have received something that may be called a municipal system; the constitution and the powers of all of them are now similar. When I say the powers of all of them are alike, it is with this exception, that the Act, though it gives to all those municipal bodies a power to receive, yet it confers on none a power to demand the authorities now exercised by the coexistent Boards under local Acts.

1653. Will you take an instance of one or two, and state what their powers now are, and how far you think them equal to what they should be?—Without papers before me, I could scarcely give an individual instance; there are co-existing powers even where there are old corporations. There are Boards of Commissioners co-existing with them, exercising part of the municipal jurisdiction; while in some of the large towns which have grown up under the manorial constitutions, the whole of what municipal authority is exercised, is vested in Commissioners under local Acts, such as the last witness mentioned to be now in force to some extent in Bradford.

1654. The local Acts which have been obtained in various of those populous towns are different from each other in power and extent?—They are.

J. Fletcher, Esq.

1 April 1840.

1655. Are they also in many instances unequal to the objects for which they were obtained?—In a great many instances; with regard to the constitution of the local Boards which they erect, they are various, from the circumstances under which they have been passed. As large populations have accumulated, some sort of municipal regulation was found absolutely necessary, and part of the inhabitants, whichever party was the strongest, or whichever party in the town thought it right to try first for an Act, would form a plan among themselves according to their local interests and feelings; the party which in this way reduced into form the plan, brought it to the House of Commons; a measure not made by the House on any system, but made in the country, under the influence of the local feelings and purposes of the parties themselves, without control or direction. The House of Commons rather registered their enactments than formed a municipal constitution for them upon any system; the consequence is, that the territorial extent of the jurisdiction of these commissions under local Acts is often exceedingly arbitrary, and it may be said, in some instances, perfectly absurd; for they include, perhaps, only the centre of a town, or but part of its suburbs, or only half a town; or there will be three or four commissions existing contemporaneously. Such is the state of the municipal regulation in many large towns at this moment; and I have before me a singular instance of the course pursued in constructing the local Boards. This is an Act of the 11th George the 3d, c. 44, intituled, "An Act for the better Paving, Repairing, and Cleansing the Streets, Lanes, Alleys, and other Public Passages within that part of the Town of Wakefield, in the County of York, which lies within the East end of Westgate-street and the South side of Northgate Bar, and the North end of Kirkgate Bridge, (except so much thereof as is repaired by the West Riding of the said County of York,) and the extreme part of the Township of Wakefield aforesaid, leading from Wiengate towards East Moor, for preventing Nuisances and Annoyances therein, and for Widening and rendering the same more commodious."

1656. That is an instance of powers which are confined to particular districts?—Yes; a second Act, I believe the only other Act for Wakefield, simply extends the powers within those limits, still not including the whole town.

1657. Would it be advantageous, in your opinion, that there should be a general enactment, the provisions of which might be carried out by local authorities under certain regulations, without their being obliged to apply for a special Act of Parliament in every individual instance?—Assuredly, in present circumstances, when our whole municipal system is undergoing reorganization; when that of the country has been completely changed by the alteration of the poor-laws, and that of the towns completely altered by the Act for amending the Municipal Corporations: these changes have caused a more strict appreciation of municipal duties, and a more strict regard to the administration of municipal revenues; sometimes duties, which were formerly discharged irregularly, are now not discharged at all, because there is no regular authority for discharging them, or for defraying the cost of their discharge; the enactment, therefore, of some system, which should give to constituted authorities, where there are proper authorities, a complete, systematic, universal, and perpetual power for municipal regulation, is certainly worthy of the deepest consideration; though in some instances, I doubt whether it will be found that there are any authorities existing worthy to be trusted with that system of powers which might be instituted.

1658. With respect of some system of regulation as to buildings, with regard to ventilation and sanitary regulations for the health of the inhabitants, do you not think that some such regulations ought to be laid down as might generally be adhered to in those populous districts, for the sake of the health of the inhabitants?—That some such system is highly important for the health of the inhabitants, and for the prevention of most intolerable nuisances in the large and growing towns, I cannot doubt in the least; there are scarcely any of the great towns in the north which do not exhibit that too offensively to the eye, and to every sense, to be doubted.

1659. Are there any powers now equal to the emergency?—In some towns there may be; but the whole are so irregular, that they want reducing to form.

1660. In these respects you think there ought to be some general regulations laid down, which might be enforced by the local authorities, for the sake of the health of the inhabitants?—A complete system by which the public could secure the cleansing, draining, and paving of the streets, and perhaps the proper construction of the dwelling-houses to be erected, both upon a good ground plan, and upon a structure which shall secure all the first requisites of health, would be very desirable.

1661. The question respects not the ground plans for the construction of buildings, but merely the prevention of the construction in such a form as shall be highly injurious; do you not think that such a requirement would be beneficial?—I used perhaps terms not sufficiently explicit; I meant the ground plan merely of the streets and not of the individual houses; they should be of sufficient width, and care should be taken that the houses should have a thorough draught, and not be built back to back, without back offices; these matters, regarded with a view to prevent public nuisances, injurious to the public health, are subjects of municipal government which it would be no violation of principle to interfere in regulating, and the enforcement of such regulation would materially contribute to the health of large towns, and the welfare of the population.

1662. On the same principle as the power which now exists in London of enforcing the thickness of party-walls to prevent fires?—Yes, precisely so; and not only is there that instance, but in the local Acts which already exist in the irregular system I have described, there will be found contained in one or other of them, all, and more than all the purposes contemplated; for instance, in the Blackburn Act of the 42d of Geo. 3, is found an enactment as to the construction of the flues in the houses. That Act provides, that no flue in a house shall be carried within five inches of any piece of timber; and that should any such flues now be existing, they shall be altered; which is certainly going to the extreme of interference with property.

1663. Mr. *Tufnell.*] Are you aware of any regulation of a similar nature in any other Act?—In most of them there are special provisions against the construction of flues outside the building; against projections into a thoroughfare, and in fact every interference with the private purposes of the builder where such interference prevents a nuisance to the public, or a supposed danger. It is not the Commissioners of Sewers alone to whom I refer, but to the Commissioners for Paving, Watching, and Lighting, and so on; all these purposes are contemplated by the local commissioners in the several towns.

1664. *Chairman.*] With respect to some system of inspection, does it appear to you, from your knowledge of those matters, that there is any system of inspection existing at present in those large towns, with reference to drainage and cleansing, and other regulations applicable to the health of the poorer inhabitants, or is some such system wanted?—Assuredly it is wanted; the supply of that inspection has never been a subject in contemplation, where the power for conferring the benefits has never existed, and that, I apprehend, is very commonly the case.

1665. Even if powers sufficient for the enforcing of those objects were given, would not some system of inspection be also necessary?—Yes; especially in the large towns; it is within the cognizance of all, that every manor, and every town, has commonly its leet jury, who annually present everything obnoxious to remark as a nuisance which comes to their knowledge, and which is thereupon ordered to be removed.

1666. Are there everywhere powers sufficient for those purposes?—I think not.

Veneris, 3° die Aprilis, 1840.

MEMBERS PRESENT.

Mr. Baines.	Mr. Mackinnon.
Mr. Cowper.	Mr. Slaney.
Mr. Greene.	Mr. Walker.
Mr. Ingham.	

R. A. SLANEY, Esq. IN THE CHAIR.

Dr. *James Williamson*, called in; and Examined.

Dr. *J. Williamson.*

3 April 1840.

1667. *Chairman.*] THE Committee understand you are a physician, residing in Cheshire at present?—I am residing in Cheshire on account of my health; but I still have a residence in Leeds, and am connected with the public institutions of that town.

1668. Are you acquainted with the state of the town of Leeds?—I know it intimately.

1669. Are you acquainted with this report of the condition of the town of Leeds and its inhabitants, which was made by the statistical committee of the town council a short time since, which was published in October 1839?—I am a member of that committee, and am acquainted with the report.

1670. This report has been reprinted in the Quarterly Journal of the Statistical Society of London?—I believe it has.

1671. For January 1840?—Yes.

1672. Being a member of this statistical committee in the town of Leeds, you can inform the Committee generally, whether that report to which the Committee is going to refer is accurate in its details?—I believe it is.

1673. Have you the means of knowing the general accuracy of the report from the respectability of the parties who conducted it?—I have.

1674. From what you know, from the general condition, and the state and respectability of the parties conducting it, have you any doubt whatever it is substantially correct?—I have no doubt that it is substantially correct.

1675. There is a description, in that report, of the condition of the streets in Leeds; have you any doubt that that part of the report is correct?—I am quite confident, from my own knowledge of the state of the streets, as well as from my being assured from others of the fact, that those details have been collected with very great care, and that the statements in the report are correct.

1676. Now the Committee wish to call your attention to the different wards. With reference to the north ward, which is reported to contain 80 streets, they say 37 are good, 14 middling, 15 bad, and 14 very bad. By the term "good," is meant the state of the surface. The word "middling" is intended to apply to streets that are paved, and which are now and then swept by the occupiers of the houses. "Bad" is understood to be a term applied to half-paved streets, which are never swept; and the "very bad," to the broken and undulating surfaces of those which are, at the same moment, a street, a pond, and a midden or a dunghill, never swept, never cleaned nor drained; all-absorbent, in the fullest sense in which such term is applied. It is stated, that the condition of some of the streets and dwellings in this ward is proverbially bad. Is that the case?—It is strictly true.

1677. They refer to the Leylands, Skinner's-lane, George-street, Union-street, Ebenezer-street, Golden-buildings, Harper-street, Wellington-yard, and Boot and Shoe-yard. All the streets and dwellings in this ward are stated to be more or less deficient in sewerage, unpaved, full of holes, with deep channels, formed by the rain, intersecting the roads, and annoying the passengers; some ill-lighted; some without lamps, with cellars sometimes so dangerously exposed, that passengers are liable to frequent accidents, and sometimes rendered untenantable by the overflowing of sewers, and other more offensive drains, with ash-holes, &c. exposed to public view, and never emptied; or being wholly wanting, as is frequently the case, the refuse is accumulated in cellars, thrown into

into the streets, or piled against the walls. Is that an accurate description?— It is an accurate description of the condition of the streets.

1678. It is stated, that in the Boot and Shoe-yard there are a number of rooms, inhabited by 340 inhabitants; the number of rooms being about 57, with an average of six persons to each room; the annual rental being 214 *l.* That there are three out-offices, from one of which, during the period of the cholera, 75 cart-loads of soil were removed by the order of the Commissioners, and which is reported not to have been cleaned out since. There is no water within a quarter of a mile; very few of the inhabitants possess vessels in which to hold or to attach water. Is that a correct description?—It is. If the Committee will allow me, I will add a fact or two in confirmation of the statement. The Boot and Shoe-yard terminates in a *cul de sac*; there is no free passage of air through it; there is no means whatever for the regular perflation of the yard. From that yard I have reason to know, as one of the physicians of the Fever Hospital in Leeds, that cases of malignant fever are continually being sent to our Fever Hospital.

1679. Does that arise, in your opinion, from the neglect of these regulations as to the cleansing, drainage, and ventilation?— In some instances I have reason to believe that the fever did originate in that neglect; when, for instance, persons in previously good health visited and lodged in the houses, and were very soon afterwards seized with fever, and those who nursed them, from healthy districts, were in succession attacked; and in further confirmation of the fact, I may state that in an adjoining yard, where all the circumstances of the people are very similar, there was one house which for many years had been the seat of fever of a very malignant character. Three years ago the attention of the Commissioners of Police was directed to the effect of the extremely imperfect drainage of the surface water; at that time a better escape for the refuse water was provided, and since that period, I believe, we have not had a single case of fever from that particular locality.

1680. Can there be any doubt that the circumstance which you have confirmed with respect to the cleansing, draining, and ventilation of this district, has the effect of making any disorders of a contagious nature more virulent, and less likely to be cured in that district?—I have had extensive experience in reference to that locality favouring the dissemination and aggravation of cases of malignant disease, and I have no doubt whatever of the injurious operation of consequences to the public health.

1681. Are the inhabitants of the district which has been described, chiefly of the working or the poorer classes?—Almost altogether so; the great proportion of them are the settled population, but they are mixed up with a large portion of the more vagrant population.

1682. Does not the character and station of the inhabitants and persons inhabiting this district more particularly call for attention in the drainage and cleansing of the courts and close places in which they live?—The scanty means of support on which many of them subsist, and their peculiar exposure to the causes of mental and physical depression, render them, under such circumstances of imperfect drainage and cleanliness, very liable to serious diseases, and seem peculiarly to call for precautionary measures.

1683. Now the Committee wish to call your attention to the district called the North-east Ward, containing 93 streets, which are of the following character: 27 good, 19 middling, 31 bad, and 16 very bad; it is stated that the bad are very numerous, and consist chiefly of streets half middling, and the other half very bad, having dangerous excavations, cellar-steps unprotected, bad drainage, little or no sewerage, here and there pieces of stagnant water, ash-holes exposed, out-offices without doors or seats, very unsafe, and filthy dark passages and flights of steps forming thoroughfares from one street to another, worn out and exceedingly dangerous. Is that a correct description of the state of that district?—It is.

1684. Then it goes on to say, that there are several horrible places in this ward, which are utterly impassable for filth of the most offensive description. In Mabgate, a considerable distance alongside the Beck is unprotected, and not long since a child was drowned there. Is not the Beck a kind of open sewer or rivulet into which the filth of the town flows?—Precisely so; a beck is a brook or rivulet; at the same time the river is used extensively for mercantile purposes, it serves as a common receptacle for refuse matter.

Dr. *J. Williamson.*

3 April 1840.

1685. Is it open?—It is. I have to state in connexion with that fact, that the river Aire, the Beck or brook, which was adverted to in the report, and another small brook, receive all the refuse water and much of the filth which is poured into the drains from the town.

1686-7. Is this district likewise inhabited chiefly by the working and poorer classes?—It is.

1688. Now turning to the East Ward, another ward of this town, it is described as in rather a better condition; they say, however, that of 122 streets, 17 are middling, 28 bad, and 42 very bad. They say there are a large number in as bad a state as those previously described; that many Irish families live in some parts of this ward, and keep pigs in the cellars which they themselves inhabit. Is that an accurate description?—I believe it is.

1689. The South Ward, the Kirkgate Ward, the Mill-hill Ward, and the West Ward, are stated to be in a better state than those which have been adverted to, but still that in each of them there are several streets which fall under the designation of middling, bad, and very bad. Is that an accurate description?—I believe it is so; those parts of the town are chiefly occupied by persons in more easy and affluent circumstances.

1690. In the North-west Ward, however, it states that there are 77 streets; that 32 are good, 23 middling, 17 bad, and five very bad: the report goes on to say, that in this cursory description of the superficial state of the wards, more credit is allowed to the heading "good," than in common fairness ought to be; then it goes on to say, the condition of all those where the population is extremely dense, where the traffic is necessarily great, and where there is hardly sufficient fall for sewerage, even if it were attempted, may be easily imagined. The attention of the town council is directed to the following points for consideration in this part of the survey: first, the want of out-offices for the accommodation of the inhabitants, and the necessity of some surveillance over those which may be said to be public, for the purpose of maintaining the general health; secondly, the offensive practice which prevails of allowing the conveniences outside of public-houses to remain exposed to public view; thirdly, the intersection of the public streets with clothes lines; fourthly, the cellars and steps which are unprotected in public causeways; fifthly, the state of the sewerage, and the consequences which ensue from a general want of it. Now, without going into details on the first of those points, you are aware that very great want of supervision and improvement is stated by the town council. With respect to the three first points, the want of out-offices, and decent accommodation for the inhabitants, the offensive practice of allowing the conveniences to remain exposed to public view, and also the intersection of public streets with clothes-lines; you are aware of that, are you not?—I am.

1691. And the town-council report most strongly as to the necessity of improvement in those respects; do they not?—They do.

1692. Do you recollect this fact, which is stated in the report: the intersection of the streets with clothes-lines is an anomaly in street regulations; in the township of Leeds, out of the total number of 586 streets, 276, or nearly one-half, are weekly so full of lines and linen as to be impassable for horses and carriages, and almost for foot-passengers; is that a correct statement?—It is.

1693. They state the want of any distinct place for the working classes for their important domestic purposes?—There is no place for washing or drying clothes sufficiently near the town to be generally available by the working classes.

1694. They state also, without going into minute particulars, the necessity of some improvement, with respect to the cellar openings and steps of the causeways; that many accidents have occurred for want of due precaution; is that the case?—It is so, and has been so.

1695. Now the last point to which the Committee will revert is the most important of them all, and that is with respect to the state of the sewerage. They state that although a great deal of doubtful information has been rejected, yet much valuable matter has been obtained; and the general result is summed up in these words, showing that the sewerage and drainage of the township of Leeds is exceedingly deficient, and altogether inapplicable to the wants of so large a population; is that a correct statement?—The extreme deficiency of the sewerage and drainage is universally admitted.

1696. They

1696. They enter into particulars with respect to various streets and wards, showing the inefficiency of the present system, and the necessity of some improvement; do you, from your medical knowledge, believe that to be necessary for the health of the inhabitants?—I am quite satisfied, from a very careful observation, that the health of the inhabitants suffers very materially from want of a proper sewerage, not only in the occasional breaking out of malignant diseases, but in the deteriorating effects of foul air, and noxious emanations from the surface, upon the general health and comfort of the people.

1697. Now with respect to the general neglect of sewerage, the Committee is going to call your attention to some particular instances: The report says, that in the spring of 1839, during several days of uninterrupted wet weather, that this sewer in Regent-street was engorged, and emptied itself into the cellar dwellings of that densely populated and lowly situated neighbourhood, producing all the results of malaria, and rendering the health, and even the lives of the inhabitants precarious; have you any doubt of the accuracy of that statement?—I am not able to confirm the report from any experience of my own, nor do I recollect the particular facts, but I presume it is correct.

1698. Have you any doubt, from the character of the persons making that report, that it is correct?—I believe it is so. I have frequently traced the irruption of disease to the reflux of the contents of drains to their sources.

1699. It is stated that so fatal were the effects, that the registrar of that district made a report, that during the period in question, there were in that neighbourhood two births to three deaths, whilst in all the other districts there were three births to two deaths. Then they go on to say, other populous districts are shown in the report to be wholly without sewers, or so inadequately provided, that they could derive no advantage from them; is that a correct statement?—I have no doubt that the relative proportion of births and deaths is a correct report, but I am not prepared to support the inference which is drawn from it, because there may be other causes to which it is ascribed than those co-operating.

1700. You think that though the inference might be a mistaken one, yet the fact is correct?—I think it is extremely doubtful whether it did arise exclusively from that cause.

1701. It says, other populous districts are shown in the report to be wholly without sewers, or so inadequately provided, that they could derive no advantage from them; you have no doubt as to that, have you?—I have not.

1702. It is said that in some of the areas of the houses, the cellars and dwellings are seldom dry; that with respect to several streets, the inhabitants of the town from time to time have vainly attempted to repair these streets with shovelsful of ashes, and soil, and refuse water standing in every hole where a lodgment can be made, there to remain until absorbed by wind or sun, a perpetual nuisance to the eye, and a perpetual fever to the whole body. Now, without exactly drawing the same inference, do you know that to be the general condition of many of the streets there?—I believe that these statements will apply to many of the streets, figuratively.

1703. They state that there are some streets on the York-road, where every house has a sump-hole under its cellars, full of deposit, long since stagnant; that there are parts upon the north-east and north wards, the cellars of which are humid and dark, with undrained land and regurgitating sewers, and they state these various descriptions of the neglect of sewerage and drainage to be the cause of ill health to the inhabitants; do you believe those statements to be correct?—I have no doubt those statements are correct.

1704. Now, they state that the population of the north-east ward, which is of a very bad description, which the Committee had before, is 16,269, and that of those 15,399 consist of the working classes; have you any doubt of the accuracy of that statement?—I have no doubt that that is true.

1705. They state the difficulty, under the present powers, of remedying these evils, and they say in one part of it that in many instances, where the property of one street is in many hands, one-half of the landlords have originally completed their respective parts as regards paving and sewering, but the cupidity, obstinacy, or poverty, or all combined, of other owners, or even of a single one, has prevented the improvement of the whole; have you any doubt

Dr. *J. Williamson.*

3 April 1840.

doubt that that would be the case?—No; I have no doubt that such difficulties exist, and I will mention a fact in corroboration of this statement: the owners of property in a considerable street were anxious to have their street drained; but the only sewer with which they could connect the drains going through their street belonged to the proprietor of an adjoining street, who not being satisfied with the premium they proposed to give him for allowing the drains of the new street to be connected with his sewer, no drainage was effected, and the only provision which the greater part of this street now has, for the removal of its foul water and other filth, is in the construction of a number of sump-holes or cess-pools, from the emanations from which I have frequently observed serious injury to arise to the health of the inhabitants.

1706. Then the obstinacy or cupidity of one individual prevented an improvement which would have been of great advantage, in a sanitary point of view, to a very considerable population?—Certainly.

1707. Then such a system, in your opinion, requires some remedy?—There seems nothing but a new legislative enactment adequate to meet such an evil.

1708. The general conclusion of the town-council upon this part of the case is, they say, one thing is certain, that the greater part of the town is in a most filthy condition, which demands an immediate remedy; a remedy which does not seem attainable under any local Act now existing, but calls for an especial enactment, which is doubtless required not only for Leeds, but, more or less, for every town in the empire. Can you confirm that portion of it that relates to Leeds?—I can, most certainly.

1709. Does your observation, as far as you have had an opportunity of forming an opinion, with respect to other large towns that you know, confirm that opinion with respect to those towns?—I believe the circumstances of many other towns in this respect are similar, and require some remedy.

1710. Now the Committee wish to call your attention to another point, and that is as to the construction of the houses in some of these districts and the ventilation; the Committee are informed that there are a great number of houses, inhabited by the poorer classes, that are built as it were back to back, so as there is no current of air. Is that the case?—It is a very common mode adopted in the construction of the houses.

1711. Is not that very injurious to the health of the inhabitants, by not allowing to densely-crowded houses, such as those inhabited by the poorer classes frequently are, and also not kept very clean; is it not highly important that there should be some mode in which air might pass through, so as to ventilate them?—I conceive it is of the greatest importance to their health, and also to their moral and social condition.

1712. You think this construction of their houses is injurious to their health?—Exceedingly.

1713. Now are there not in this town, as well as in many others inhabited by the working classes, a considerable number of alleys and courts in which the houses are near together, and in which they are built in a *cul de sac*, where there is no open space at the end?—Connected with a few of the principal streets, there are numerous lateral alleys or yards in which a free circulation of air is entirely prevented by their close construction, and their partial closure at their extremities.

1714. Is not such a construction also likely to be very injurious to the health of the inhabitants?—I am quite satisfied it is.

1715. Are you aware that at present there is no power, by means of either sanitary regulations or legal enactment, for preventing such construction?—Having been many years extremely anxious to promote improvements in the dwellings of the operative classes of Leeds, I have made many inquiries to ascertain if the law would assist any authorities to enforce a better mode of construction of houses and streets, and I have found that no adequate provision exists for that purpose.

1716. Would it not then be of the first consequence to the welfare of the working classes, that there should be some general regulation laid down, either in a general building Act, or some Act generally applicable, not for interfering with the general construction of houses, but for preventing their being built in such a form and manner as experience has shown is highly detrimental to the health of the poorer inhabitants?—The working classes are now exposed to the evils arising from cupidity and defective arrangements of many of their landlords,

lords, and they appear to me to require the protection of some such general enactment improve their condition.

1717. Such general regulation might be carried out by local authorities in such a way as might be found most practicable?—There would be no difficulty, I should consider, in doing that.

1718. Such a regulation would fall under the general principle recognized by our law, that you shall so use your own property as not to injure your neighbours; would it not?—Certainly.

1719. In consequence of the neglect of such provision, and other necessary provisions and sanitary regulations as regards the state of the working classes, have you any doubt that fever and disorders are generated and increased, causing thereby great expense, subsequently, to the other classes?—I am quite sure that contagious diseases are frequently engendered from such causes, and propagated from the lower classes to those under more favourable circumstances, and that the general atmosphere of towns so situated as Leeds, impregnated as it is with those offensive exhalations, must prove directly injurious to the health and comfort of all classes; and also that the exposure to these alleged causes of disease of the poorer classes must entail upon the other classes of society a very great augmentation of expense in maintaining the former when sick, and in meeting the various other casualties arising out of their illnesses.

1720. That is to say, that a great expense is cast upon the richer classes by means of the illness, the weakness, the debility, and the loss of their parents, consequent in many cases from fevers, and from disorders generated by this neglect?—Certainly.

1721. Now in this district of Leeds it is stated, that nearly 13 out of 17 of the whole town consist of the working classes; is this the case?—That is true I believe.

1722. In a town so situated care with regard to sanitary regulations seems more peculiarly necessary; does it not?—Undoubtedly.

1723. But in this instance it seems very greatly and grossly neglected?—Very opprobriously so.

1724. Does there not want, in your opinion, some increased powers for drainage and sewerage in this town, under some general Act, the provisions of which might be enforced by the local authorities?—It would be one of the greatest boons imaginable to such large towns, if the evils complained of could be met by a general enactment.

1725. Are you aware that, under the local Act of Leeds, there is no power, even if a sewer comes quite close to a house, to oblige the proprietor of it to communicate with it by means of an underground drain?—In the local Act of Leeds there is no such power.

1726. Do you not think that some such power would be a very material advantage to the health of the district?—Unquestionably.

1727. Do you know many instances of neglect in landlords of these sorts of dwellings, tenanted by the working classes, that neglect to communicate in the way that has been mentioned?—I know a great many instances of neglect on the part of landlords of ever attempting to connect their respective properties with sewers by means of under-ground drains.

1728. In a town inhabited by so a large a portion of the working classes there is no doubt a vast number of children?—A large portion of the inhabitants, of course, are children.

1729. Is it your opinion that the neglect of cleanliness, decency, and the removal of filth and dirt from the courts and houses in which these poor persons reside has an injurious effect upon the moral character of the people, as well as upon their physical condition?—I am quite sure that the physical depression arising from these causes exercises a very powerful influence in producing a morbid state of the animal feelings, and in lowering the moral tone of the people.

1730. Do you think that it has a more peculiar effect upon the young population who are just coming into life, and who are exposed to the evils consequent upon being in these dirty, neglected, and miserable dwellings and courts?—I should conceive it has a less prejudicial effect of a moral kind upon the children than upon adults; but, physically, it is more injurious to the earlier periods of life.

1731. Do you not think, that if the children go to any schools where they may be well instructed and well taught, where cleanliness and decency of

Dr. *J. Williamson.*

3 April 1840.

deportment may be enforced, and where kind manners towards each other may be taught them, that the evil examples they find immediately around them, and the neglect of cleanliness and decency they see every moment about them, tend to neutralize very much any thing that they might learn at the schools?—I have no doubt of it; and I believe such filthiness and disorder experienced at home loosens the domestic principle so materially as to operate very detrimentally on the characters of children. I mean to say, that the disorder and filthiness of many of the houses, by rendering home the object of disgust to children, exposes them to various injurious influences out of doors.

1732. Was not the same cause a tendency to drive the adults from their homes to public-houses and spirit-shops, instead of finding their comforts by their fireside?—I believe it does, and one can scarcely wonder at men being tempted to frequent the public-house when one inspects the wretchedness and squalor of some of their dwellings.

1733. With respect to the children, you consider that the example they see around them in their homes and the streets where their dwellings are situated, has a considerable effect in doing away with the advantage which they would receive from good instruction at the schools?—I am quite sure it has.

1734. Are you of opinion that no system of good instruction carried on at the schools, even if extended to all the children of these poorer classes, would be effectual unless some improvement took place with regard to those points which affect the situation of the dwellings which has been spoken about?—I believe the benefits arising from education would be very much neutralized by continued neglect on these points.

1735. Are there any considerable schools in Leeds for the children of the working classes?—There are several large public schools for the working classes; day schools and Sunday schools.

1736. Are there any play grounds of an adequate size appended to the schools for the children of the working classes in which they might take exercise during those hours which intervene between the hours of study?—With the exception of the infant school, I am not aware that any of the public schools at Leeds have such grounds connected with them.

1737. Does it not appear to you that some such provision would be of great advantage to the children of the working classes, giving them the means of exercise, and the means of having their minds at ease, during the period they were not at their lessons?—I believe it would be very beneficial to their health, and a direct means of promoting their moral improvement.

1738. Is there any open ground reserved in the vicinity of Leeds to which the humbler classes can resort, either as a public walk to go to with their families on a Sunday or on a holiday, or to which they could go for the purpose of exercising themselves in any of the sports or amusements which they may occasionally resort to on a holiday?—There is a considerable open ground about a mile from Leeds, called Wood-house Moor, which is open to the working classes, and where some of them are frequently found taking exercise.

1739. Is that tolerably well drained; have any pains been taken with it, either for draining or laying it out, so as to have a good gravel-walk or seats, or any of that kind of accommodation which would be useful in the vicinity of so large a town?—Three years ago it was drained, chiefly for the purpose of furnishing employment to the working classes, who were then suffering from the want of work, but it has no accommodation in the shape of seats, nor is it laid out in walks.

1740. Mr. *Cowper.*] Are the working classes in the habit of repairing there on Sundays?—I do not think it is particularly the rendezvous of the working classes on Sundays; those of them who take exercise are generally found walking on the public roads in two or three directions from the town.

1741. It is not frequented by the labouring classes on a week-day, is it?—Not to any great extent.

1742. *Chairman.*] Are there any regulations with respect to their conduct, and so on, so as to prevent riots, and yet at the same time ensure their having the use of it for amusement?—This ground is used occasionally for public purposes, as at the elections, when provision is made for the keeping of public order by the appointment of the police, but that is not the case on ordinary occasions. It is also used by the military.

1743. Are there any fairs, or meetings of that nature?—There is annually a fair.

1744. Are there any regulations at that time with respect to the police, so as to prevent drunkenness and disorder?—There is no special regulation.

1745. What is the state of Leeds with regard to the supply of water?—It is exceedingly deficient; Leeds is supplied with water principally from the river, the contents of which are exceedingly impure, from a few public wells, and by water-carts.

1746. Do you not consider that a due supply of good water is one of the first necessaries, and one of the first advantages towards a good state of the health of the working classes in many populous districts?—I think it is impossible to over-estimate the importance of a plentiful supply of good water to the working classes as a means of promoting their health and comfort.

1747. Leeds is considered the first town in the kingdom as regards the woollen trade, is it not?—It is the leading town as regards the woollen trade.

1748. And it has been increasing in population most rapidly within the last 30 years, has it not?—It has nearly doubled its population within the last 30 years; in fact, it has doubled its population.

1749. And during that time, it appears from the account given in this report, and which you have confirmed, that no due provision and regulation has been made with respect to drainage, sewerage and cleansing, ventilation and building, and for the supply of water for this vast community?—Certainly not, with the exception of a better supply of water.

1750. Do you not think, as a medical man, resident in the town, and cognizant of the state of the inhabitants, that these matters call most imperatively upon the Legislature for some assistance?—I very decidedly think so; and no subject of greater real importance could engage the attention of the Legislature.

1751. The Committee have called your attention to the effect of this neglect upon the health and upon the moral condition of the adults, and also upon the children in Leeds; now have you any doubt that the consequence of this neglect has also been to cause in the minds of many of them great discontent and dissatisfaction?—I have no doubt it has; though, in reference to most of them, I fear there is an apathy or a want of perception of the evil results of the peculiar circumstances under which they are living.

1752. Mr. *Cowper.*] Will you explain the nature of the effect produced by a confined and impure atmosphere upon the health of the persons exposed to it?—Our impure atmosphere acts injuriouly upon the health of those exposed to it; at one time, from the existence of some subtle influence, apparently of the nature of a poison, generated by the decomposition of animal and vegetable matters, in situations defectively drained or sewered, or by the assemblage of a large number of living persons in a very confined atmosphere; at other times, the foul air operates prejudicially upon the health by the excess of carbonic acid gas, the product of respiration, and which is deleterious to human beings. The mere circumstance of excessive moisture, especially if conjoined with deficient light, is prejudicial.

1753. And the exposure to these injurious influences weakens the frame and constitutions of the persons who are exposed to it?—Certainly; it weakens the frame, and predisposes to many diseases, and directly induces others.

1754. What effect has it upon the digestive organs?—Its effect on the digestive organs is very perceptible, though it is probable, in such instances where it operates prejudicially upon the digestive organs, it acts through the medium of the general constitution, and amongst the humbler classes such causes act more intensely, from defective or improper diet.

1755. Have you observed that in the treatment of these persons, you are obliged to have recourse to less violent remedies than you have to people living in a purer atmosphere?—Persons living exposed to this peculiar noxious influence seldom bear the use of those active depleting measures which are sometimes necessary for the removal of disease.

1756. Do you believe, that when two generations has successively inhabited a district of the nature to which you have alluded, that the children become weaker and smaller in stature than other children do?—I can have no doubt that the exposure of several successive generations of persons to such circumstances, must permanently enfeeble the system and deteriorate the offspring.

1757. Mr. *Greene.*] Do you know the state of the sewerage of the larger streets in Leeds?—Some of the larger streets in Leeds are comparatively well sewered, but these are the great thoroughfares.

1758. To what extent do you mean to say the sewers of those large streets

Dr. *J. Williamson.*

3 April 1840.

go; are they merely side-drains on each side of the street to carry off the surface water, or do they consist of one large sewer passing down the centre of the street, for the purpose of carrying off all the foul water from the several houses in the street?—The drains in the streets comparatively well sewered, to which I have alluded, traverse the middle of the streets, are large, and receive the supply of foul water from the houses on each side of the streets, but having been constructed at different times, they are not always well adjusted to each other.

1759. In many respectable houses, at some little distance from those sewers to which you have adverted, how do they get rid of the supply, and empty their privies, and matters of that description?—The contents of their privies are periodically carried away by carts, and cess-pools are frequently formed, in connexion with those houses, to receive the refuse water proceeding from them.

1760. Does your last observation apply also to the streets which you have said have very good sewers?—No, it does not apply to the streets which have very good sewers, the inhabitants of such streets having sufficient means for the removal of their refuse water by these common under-ground drains.

1761. How many streets in Leeds should you say were well sewered?—I really cannot tell; but certainly not half of them.

1762. You said the town of Leeds was supplied with water from the river; do you mean merely by drawing it from the river, or is there any water-works by which it is thrown up to the houses of the several streets?—There are water-works to throw up the water from the river into four or five reservoirs, from which it is conveyed to the different parts of the town; but the supply is so extremely scanty that it was found necessary three years ago to apply to Parliament for an Act for a new water-works company, which was obtained, and another and more ample supply of good water is expected to be brought to the town in the course of two years.

1763. At the present moment is there any supply of water in these poorer parts of the town?—These poorer parts of the town are most miserably supplied with water, chiefly from the river.

1764. Do you mean by means of the water-works?—By means of the water-works, and by means of carts which hawk water about; and I will mention, to show the extreme scarcity of water in Leeds, that some poor families have paid as much as 2 *s.* a week for the water which was hawked about in carts.

1765. Mr. *Walker.*] The water is supplied from the river Aire, is it not?—Yes.

1766. The river at Leeds is full of impurities, is it not?—It is; it receives all the foul and excrementitious matters from the various sewers.

1767. And likewise all the impurities from the dye-works and mills?—Yes; and from all the various manufacturing operations.

1767*. The water is pumped from the river and lifted up to the reservoir, is it not?—Yes.

1768. Is there a good system of filtration adopted?—A very imperfect one exists.

1769. Consequently the water which is used by the inhabitants is of a very impure description, is it not?—Decidedly.

1770. Must not that have a very detrimental effect upon the health of the inhabitants?—Certainly. Under the provisions of the new Act for the establishment of a new water-works company, arrangements exist for the gratuitous supply of the poorer classes with purer water.

1771. How far does that extend?—It extends nearly through the whole township of Leeds, and through parts of some of the adjoining townships of Hunslet and Holbeck; those are populous townships adjoining, and forming parts of the borough of Leeds.

1772. From what part of the district does the supply arise which is contemplated by the new Act of Parliament?—Its source is about eight miles from Leeds, in a north-westerly direction, in the neighbourhood of Harewood.

1773. The supply from that quarter will be of a purer description?—It will.

1774. Have you any public baths in Leeds?—We have two public baths in Leeds; one which contains bathing accommodation of a superior order, which is principally resorted to by the better class; and another bathing establishment, the

the terms of which are low, and which is to a certain extent used by the working classes.

1775. Are the working classes obliged to pay something for the accommodation?—They are.

1776. Can you state the amount?—I think 2 *d.*, but the working classes also bathe in summer a good deal in the river and in the canal.

1777. Is there a general disposition in the working classes to avail themselves of that recreation?—I should not think there was; there is a remarkable apathy among all classes upon the importance of bathing, as a means of preserving health.

1778. Do you consider that a very important element?—I consider it has a very important relation to the health of the community.

1779. Have you great numbers of Irish workmen in Leeds?—I believe we have from 4,000 to 5,000 Irish persons who live in Leeds; they are chiefly of the operative class.

1780. They are probably the very poorest class?—They are many of them of the very poorest class; some of them, however, are very skilful artisans, and in better circumstances.

1781. Does your answer refer to the township and borough, or to the township only?—To the township only; the township and borough contain nearly 10,000.

1782. Are they generally employed as artisans or common labourers?—They are employed, some of them, in the various processes of manufacture, especially in the worsted and woollen trade, and others are employed as labourers.

1783. Do you see any marked difference between the apparent comforts existing in the dwellings of the Irish and the English operatives?—The domestic comforts of the Irish are generally much fewer than those of the English labourer.

1784. Do they generally reside in entire houses, or do they huddle together in families in one building?—They congregate very much together in families and in lodging-houses.

1785. Does their residence in Leeds occasion apparently any improvement in their habits, after having sojourned there for some time?—I think I have observed, in many of the Irish, an improvement with regard to their character and habits of life after many years' residence.

1786. Are the habits of the working classes of Leeds at all acted upon by the temperance societies?—I know that many of the most abandoned and profligate members of society have been reclaimed by temperance societies; but I should not think that hitherto the temperance societies have effected any general amelioration in the habits of the working classes in Leeds; but they probably have, in some degree, checked the progress of intemperance.

1787. *Chairman.*] Does the use of ardent spirits still prevail to a great extent?—It does, to a great extent.

1788. Chiefly amongst the poorer classes?—Chiefly amongst the poorer classes.

1789. You have before said, that you thought they were driven to it in some measure by the neglect of comfort in and about their homes?—A great many of the habitual spirit-drinkers are those whose circumstances of life are the most destitute.

1790. Are there many lodging-houses of the lower class in Leeds?—There is a great number; but I cannot say the precise number.

1791. What is the state of them. Are you acquainted with the state of them with regard to cleanliness, whitewashing, and ventilation, and other sanitary regulations as regards the lodging-houses to which the poorer classes resort?—I have visited several of them in the course of my duty as one of the physicians of the Fever House, and their condition was for the most part very defective, and often dirty and neglected.

1792. What was the state of the internal part of those lodging-houses that you have looked into?—They are frequently crowded with inhabitants. In some instances 16 persons were found in a room from 15 feet by 13 feet, and 9 feet high, with one small window, which, during the day and night, was kept entirely closed. The same room served as the day and sleeping apartment.

1793. Then the ventilation was entirely neglected?—The ventilation, in many cases, was entirely neglected.

Dr. *J. Williamson.*

3 April 1840.

1794. Now, with respect to cleansing, whitewashing, and other obvious regulations for health in these crowded lodging-houses, are they neglected or attended to?—Except during times of public alarm, on the approach of serious epidemics, or when the officers of the Fever Hospital, or some benevolent person, casually interfered, the whitewashing and cleansing of these places is very frequently overlooked.

1795. Is there any system of regular inspection as to the state of these receptacles for the poorer classes, or any system of enforcing better ventilation or better cleansing?—There is none but of the most incidental nature.

1796. There is no regular system?—There is no regular system.

1797. Can you have any doubt that the neglect of such a system of regulation, with respect to sanitary provisions of these crowded lodging-houses, is the cause of disorders being circulated amongst so dense a population?—I have had many proofs of the diffusion of malignant disorders from these lodging-houses, to all classes of the population.

1798. You think then that some power of enforcing the due inspection and regulation would be necessary to prevent the spread of contagious disorders?—I think it would be highly beneficial and useful.

1799. Do you not think it is quite as necessary for the advantage of the humbler classes as it would be for their richer neighbours?—Quite so.

1800. You are acquainted, from visiting professionally the town of Bradford, with the general state of it, are you not?—I am.

1801. Is not Bradford a large town, in which the inhabitants are occupied for the most part in the manufacture of woollen stuffs from the West Riding of Yorkshire?—It is.

1802. The population is nearly 100,000, is it not?—It is.

1803. And has rapidly increased within the last few years?—Yes, that is the fact.

1804. Now, without entering into a minute account, will you state to the Committee what, in your opinion, is the state of the town of Bradford, the most populous districts of it, inhabited by the working classes, with regard to the sewerage, draining and cleansing, ventilation, and sanitary regulations of their houses?—I have never examined the town of Bradford, in reference to this subject, with the same attention as I have the borough of Leeds. I know nothing of the under-drains; but I have noticed that the surfaces of many of the streets are unpaved, and like many of those described in the statistical report of Leeds, present continually accumulations of animal and vegetable matter, which must act very perniciously upon the health of the people. In many of the streets of Bradford, which I have occasionally passed through, occupied chiefly by the working classes, there appeared the same characters of discomfort and want of cleanliness that have been described in connexion with Leeds, heaps of putrescent animal and vegetable matter, filling the air with foul exhalations.

1805. With respect to the close courts, and the houses built without any means of thorough ventilation, does that occur also in Bradford, in many instances, the same as it does in Leeds?—I should think not in so many instances as in Leeds. Bradford seems to present great facilities for the effectual drainage of the town, but I conceive it is much neglected in that respect.

1806. Then the general necessity of some legislative enactment, conferring powers for the purpose of sanitary regulations, appears to you to be applicable to the populous town of Bradford, as well as to Leeds?—It does.

1807. Are there any other towns as to the state of which you can give the Committee any information?—Huddersfield, Dewsbury, and some other of the large towns of the West Riding of Yorkshire, I have some acquaintance with, though not of so minute a nature as with regard to Leeds; and I am decidedly of opinion that they would benefit very largely by some such general enactmeut as has been suggested.

Richard Cobden, Esq. called in; and Examined.

R. Cobden, Esq.

1808. *Chairman.*] DO you reside at Manchester?—I do.

1809. Are you well acquainted with the committee of the Manchester Statistical Society?—I know the whole of the members of the committee intimately.

1810. Do you know that within a few years past, they have been engaged in

in minute inquiries into the condition of the working classes, in several of the populous towns in the neighbourhood?—They have.

1811. Do you know that they have made a minute inquiry into the state of the working classes, and into the state of their dwellings at Manchester, at Salford, at Bury, at Ashton, at Staleybridge, and at Duckinfield?—I do.

1812. Do you recollect a report of the Committee, entitled, a "Report of the Manchester Statistical Society, on the Condition of the Working Classes in an Extensive Manufacturing District"?—I do.

1813. In the years 1834, 1835, and 1836?—Yes.

1814. It was read at the statistical section of the British Association at Liverpool, in the year 1837, was it not?—It was.

1815. Now, from your knowledge of the persons composing that committee, have you any doubt that it is substantially correct?—None whatever.

1816. The population of those towns is stated, in page 5 of the report, to be, Manchester 200,000, Salford 55,000, Bury 20,000, Ashton 22,000, Staley-bridge, 17,200, Duckinfield 8,600; total, 322,800. The report states that the class of houses visited by the committee's agent, and which alone this inquiry comprises, was that inhabited obviously by the working population, and those below the rank of shopkeepers. Are you cognizant that that is the case?—That is the case.

1817. A curious fact is stated in page 6, as to the proportion of the working population, that is, the population considered with reference to the total population of each of the six towns, which turned out to be 64 per cent. in the borough of Manchester, 74 in the borough of Salford, 71 in the borough of Bury, 81 in Ashton, 90 in Staley-bridge, and 94 in Duckinfield. It states in page 8, that the proportion of the working population residing in cellars, is in the borough of Manchester 11¾ per cent., in the borough of Salford eight per cent.; is that an accurate account?—I believe it is.

1818. You are aware that the society also gave an account of the state of Liverpool, are you not?—I am.

1819. Do you recollect facts being stated at the meeting at Liverpool, with regard to the numbers of the population at Liverpool who reside in cellars?—I do; and the fact was disputed by the Liverpool gentlemen present; they employed their own police to ascertain the facts, and the next day they corroborated the Manchester report, and found that the account was understated; the numbers living in cellars was understated.

1820. It appears that the first report that was given, and which was at first disbelieved, was that in the parish of Liverpool, there were 1,964 courts, and 6,506 cellars; and that in portions of four other townships, including principally the limits of the borough, there were 307 courts, and 987 cellars, making a total in the borough of Liverpool, according to the first account, of 2,271 courts, and 7,493 cellars. That was the account given by the Statistical Society of Manchester, the first time. Have you any doubt of the truth of it?—None whatever.

1821. Now, there is an account given in a letter from Mr. Whitty, the head constable, and which is cited in this report on the condition of the working classes, in a note, and it states (it is dated September 1837), "I have great pleasure in fulfilling the promise made to you during the conversation in the Statistical Section, as to the inhabited cellars of Liverpool; I had an accurate return made to me this morning by the inspectors, and the following is the result: North division, 4,004 inhabited cellars; South division, 3,858; total 7,862; showing an excess, in reality, over the former statement, of upwards of 360." Now, do you remember that circumstance?—I do.

1822. So that in consequence of that circumstance, no doubt remains whatever upon your mind as to the general accuracy of the report?—None whatever.

1823. Now, it is stated, in the same account so cited, of the number of the inhabited cellars, that no court was counted in which two or more families did not reside; and that above one-third of the whole numbers contained six or more families; and few of the courts had more than one outlet. Do you remember that?—I do.

1824. Is not that a state of construction which evidently would be very hostile to the health of the inhabitants?—Exceedingly.

1825. Now the report goes on to say, that no cellars were included in the

 above

R. Cobden, Esq.

3 April 1840.

above number, in which the occupants did not sleep, as well as live by day; nor was any account taken of those occupied as gin-shops; and these were the observations upon it, made in the report: "The great proportion of the inhabited cellars were damp, dark, confined, ill ventilated and dirty." Is that a correct account?—It is.

1826. A calculation is then entered into, from which the following is an extract: that there would be 31,000 persons inhabiting cellars in Liverpool, out of a total population of 230,000; or taking the working population at two-thirds of the whole, that would be about 20 per cent. of that portion of the community. Have you any doubt of the accuracy of that statement?—I have none whatever.

1827. Is not this account a melancholy account, as it regards the healthiness of the construction of the dwellings of these poorer inhabitants?—I think it is.

1828. Now can you have any doubt that the result of it is a very considerable injury to their health?—I should not doubt it.

1829. Do you recollect that in Mr. Witty's letter, which showed a greater number of inhabited cellars than in the former account, there are these words: "Allowing five inmates to a cellar,—and that number is rather under the average, the number of persons living in cellars in this town will therefore be 39,310;" that is, referring to the increased number, which the second inquiry had shown was the case?—Yes.

1830. There are then some remarks to show that poverty is not always the reason why the poorer people like to get into cellars, but that having an outside door, and a complete domain of their own, is one of the causes?—That is stated by Mr. Witty, I am aware.

1831. Could you, without going minutely into the subject, give the Committee your opinion as to the state of drainage, cleansing, and ventilation of the dwellings of the poorer classes, in the more confined districts of Manchester?—It is not a subject upon which I am prepared to speak with any accuracy at all. In large towns rapidly increasing, such as our manufacturing towns are, there will be necessarily a great number of streets not paved, and not soughed, which of course must be exceedingly prejudicial to health; but in those parts of Manchester which are under the management of commissioners appointed for the purpose, I should say they are as well cleansed and soughed as any town of the same magnitude in the kingdom, or, in fact, as any town can be.

1832. From your knowledge as a member of the Statistical Society of Manchester, have you any doubt of the accuracy of those statements which have been referred to?—I am sure they may be relied upon.

1833. In a table, which is table the third in the report of the committee of the Statistical Society of Manchester, in reference to the opinion as to the working classes, the number of persons resident in cellars in Manchester and Salford are stated thus, viz.: In Manchester, 14,960; that is to say, persons occupying cellars, and also others boarding with them; and in Salford, 3,335; is that correct?—I believe that to be correct.

Edmund Ashworth, Esq. called in; and Examined.

E. Ashworth, Esq.

1834. *Chairman.*] WHERE do you reside?—At Turton, near Bolton.

1835. The neighbourhood of Bolton has very rapidly increased in its population within the last few years, has it not?—It has, very much so.

1836. What is the population of Bolton?—Within the borough, about 50,000.

1837. Does not a considerable portion of this population of Bolton consist of the working classes?—A very considerable portion does.

1838. Has a great increase in the habitations and buildings for the habitations of the working classes taken place within the vicinity of Bolton lately?—A very considerable increase has taken place within the last 15 or 20 years.

1839. Are many of those habitations run up without much regard to any particular rules, referable to their formation, as regards the health of the inhabitants?—I consider a great portion of them are built more with regard to economy in the outlay than convenience to the inhabitants.

1840. Are

1840. Are many of them built back to back, so as that no thorough ventilation can take place?—A very great portion of them are built back to back, and consequently there is no thorough ventilation; beside which, the water-closet conveniences are crowded, perhaps in the centre of a street of houses, making the space of ground, which otherwise would have been a cottage, into a public receptacle for the whole street.

1841. Is not such a construction, in your opinion, and the opinion of medical men whom you have conversed with, highly injurious to the health of the working classes?—Such a construction is, in my opinion, very injurious, but I have had very little conversation with medical men on the subject.

1842. Now, with reference to the mode of laying them out, with regard to sewerage, drainage, and the facilities of the wet and dirt being carried off; is there a considerable neglect as regards all those provisions?—I consider, speaking generally, that there is a very great neglect, in towns like Bolton and Manchester; there are Acts for the sewerage and drainage of the streets, but I have much to regret the inefficient manner in which the provisions of those Acts are enforced.

1843. Then there are no building Acts, either local or general, which prevent this mode of building, back to back; or prevent courts being built without any ventilation to them?—I am not aware of any building Act which applies to Manchester.

1844. Do you not think that some such regulation as would have the effect of preventing the construction of dwellings injurious to the health of the working classes, would be proper and right?—Looking at the interference which such an Act would have with individuals building single cottages, it would be objectionable; but where communities are likely to be crowded, I think as a sanitary regulation, it would be highly desirable.

1845. The question only refers to crowded districts and dense population?—I was looking to the country districts, where a man might build a single cottage.

1846. But with reference to crowded districts and dense population, you think such a regulation would be proper, do you?—I think it would be highly desirable.

1847. At present is it not in fact the case, that several small owners lay out a number of dwellings intended for the reception of the humbler classes, without reference to the healthy construction of the houses, and without reference to drainage or sewerage?—It is undoubtedly the fact that houses are built in the way I have previously mentioned, but various parties do that; some as individuals, for the sake of investment, and others from the effect of a limited capital in their own manufacturing concerns.

1848. But from some cause or other, this effect, injurious to the health of the working classes, does result?—Decidedly so.

1849. In the borough of Bolton, which you are well acquainted with, are there many schools for the education of the children of the working classes?—A few years ago, we established a British school in Bolton, which has been well supported, but subsequently the Methodists established one under their own supervision, to which there are no play-grounds.

1850. Then, generally speaking, there are no play-grounds appended to the schools, in which the children might take exercise?—There is nothing but the streets.

1851. Would not some such circumstance be advantageous to them, both with respect to health and recreation?—Decidedly so.

1852. Is there any reserved space in the vicinity of Bolton, or any open ground in which the people can walk with their wives and children on a Sunday, and other days, for fresh air, or in which they may take exercise at any other time?—There are none.

1853. Mr. *Baines.*] You formerly had a moor there, had you not?—Yes, we had.

1854. Has that been enclosed since?—Yes, it was enclosed 25 years ago.

1855. Was that done without any reservation for the benefit of the public?—It was.

E. Ashworth, Esq.

3 April 1840.

1856. Do you not think, in all cases of this kind, where there is immense population, it is desirable that a reservation should be made in enclosures?—I consider it very desirable, and should have been very glad to have seen an Act of Parliament obtained similar to the one which Mr. Buckingham, a few years ago, proposed for the public recreation for the inhabitants of the towns.

1857. Are you aware that there is provision in an Act that has been passed two years ago, for setting apart ground of that kind for the purposes of recreation?—I am not aware of it, but if I may be allowed, I would state a few of the reasons on which I ground my previous opinions. Many of the working people employed in factories and other workshops of our neighbourhood, obtain good wages as a whole family, because frequently the various branches, both of the boys and girls, are employed; and it not unfrequently occurs, that a family may have forty or fifty shillings per week of income in one cottage; the houses, built back to back, afford only one room to live in, and do the cooking, washing, and other necessary domestic operations of the houses; in such cases, when the head of the family and the boys come from work on Saturday evening, the necessary domestic occupations of washing or cooking, being obliged to be carried on in the same room, renders it extremely uncomfortable, and consequently the father of the family is induced to go out for recreation and amusement to the public-house; besides which, there is little room for filling such a cottage with furniture; and I have remarked that families, with large incomes, have not unfrequently, in such cottages, a very small amount of furniture; and I have further remarked, that in our own establishment, when a family has removed into a larger house, they have frequently occupied the spare rooms with a better class of furniture, which of itself induces them to better habits, and a more respectable feeling in society.

1858. *Chairman.*] What is the supply of water?—Ample, and good and cheap.

1859. Mr. *Baines.*] Will you inform the Committee whether those persons with incomes of from forty to fifty shillings per week, cannot find more suitable cottages than you have described for them to live in?—They might, with some inconvenience to themselves, by going to a little distance; and in giving this answer, many might say, these people could do so, but young people brought up in a small cottage, have no feeling of the inconveniences arising from it, and consequently do not desire an enlarged one.

1860. Do you not think that persons desirous to invest money in building a better kind of cottages, might do it advantageously?—The most advantageous investment in cottages, is the smallest size of cottages.

1861. *Chairman.*] Do you think it would be unfair to impose on those persons the necessity of due accommodation, necessary for the health of the inmates of these places?—A law, enforcing a back-door, would almost of necessity enforce two dwelling-rooms below stairs.

1862. Mr. *Walker.*] The class of operatives who earn the gains of 40 *s.* per family, are engaged in factory employments, are they not?—Decidedly so. Factory occupations for the junior branches, the father of the family in factory employment, or any other trade in the neighbourhood.

1863. Probably the principal reason of these parties occupying such small houses, and being possessed of such great gains, may arise from the owners of the factories having built such cottages for the accommodation of their hands?—Such is frequently the case, but not always.

1864. Is it not very common for the owner of a factory to impose a necessity on his operatives to live in his houses?—Very frequently it is.

1865. May not that operate very largely in obliging these individuals to live in these small cottages?—It may in many cases.

1866. Mr. *Cowper.*] Are there any cottages of a better description usually taken by these persons?—Not unfrequently so. But the working population have so long lived in small uncomfortable cottages, that the taste for better kind of cottages is scarcely appreciated.

1867. Then better kinds of cottages are very rarely built?—Better kinds of cottages are very rarely built.

1868. Mr. *Baines.*] And that you attribute to their not being so profitable as

as cottages of a superior grade?—There are two inducements; the one, the fact of the small cottages being more lucrative to the builder, and the other, that they are cheaper to the occupant. I have known a man and his family, with a good income, go from a good cottage to a bad one to save a shilling a week; but in our own case, for 20 years, we have continued to make every successive lot of cottages more expensive and more convenient; and the most expensive cottages are the most sought after by our own people; and thus, a man with a very moderate income will desire to bespeak beforehand the first opportunity of getting into a better cottage; and families who have obtained the privilege of a better cottage, when I have inquired subsequently into their previous condition, they have scarcely been able to account to me as to what has been the inducing cause to their improved condition, but when questioned further, have acknowledged that the opportunity of putting better furniture into their houses has imperceptibly accumulated a large and valuable stock of furniture.

1869. *Chairman.*] Then you think that an improvement in the convenience and comfort of their cottages would have a very considerable effect upon their moral and social condition?—Decidedly so.

1870. And doubtless would have an effect also upon their comfort and contentment?—As a natural consequence, it would have.

1871. Mr. *Walker.*] How do you reconcile those two answers; first, that inferior cottages are the most profitable; and, secondly, that there is a great desire to possess better cottages?—It is according to the tastes of the different classes of people. The ways of men are as various as the roads they take.

1872. *Chairman.*] Is there a great demand for both kinds of cottages?—Yes, there is. I can mention a circumstance. Two young men were at school together, both in our service. One asked me to get him a cottage at 1 *s.* 6 *d.*; he then paid 2 *s.* 6 *d.*; therefore he fell off 1 *s.*, and the other asked me to go from 2 *s.* 6 *d.* to 4 *s.* 6 *d.*

1873. With respect to the social character and moral condition of those two classes, do you not think that the one who goes to the improved dwelling with additional conveniences is rather a more respectable character than the other, who goes from the better kind of dwelling to the lower sort of dwelling?—I can explain it, for I asked the young man who went to the better cottage, how he could account for the difference. He said he had become religious, and he attributed all to that. I asked him, how that became his condition, and why it was not the condition of his school companion; he said, his school companion fell into bad company, and attended to trades' unions and meetings at public-houses, while he himself preferred a more religious and better class of company.

1874. Mr. *Ingham.*] Have you any building societies in the neighbourhood?—There are.

1875. Among the working people?—They prevail considerably among the working people, but more fully among the shopkeepers and better class of people; but I do not consider building societies of much service in this country.

Lunæ, 6° die Aprilis, 1840.

MEMBERS PRESENT.

Mr. Baines.	Mr. Slaney.
Mr. Brotherton.	Mr. Tufnell.
Mr. Patten.	Mr. Vigors.
Mr. Ponsonby.	Mr. Walker.

R. A. SLANEY, Esq. IN THE CHAIR.

Dr. *James Williamson,* called in; and further Examined.

Dr. *J. Williamson.*

6 April 1840.

1876. *Chairman.*] YOU have been good enough to give the Committee an account of the poorer dwellings at Leeds, and also generally with regard to Bradford, that there appears to be a very considerable want of drainage, cleansing, and ventilation. From your experience as a medical man in those crowded districts, the Committee will be glad of your opinion on any practical points?—It appears to me that it is of primary importance that the streets should be thoroughly paved and provided with under-ground drains, and with such a surface drainage as will facilitate the escape of the foul refuse of the streets into the under-ground drains; that they should universally pervade the town, and that there should be a proper relation preserved between the size of the main drains and of the smaller contributary drains, which empty themselves into them, and that some power should exist which would oblige every proprietor to connect each dwelling-house with the main drain.

1877. Are you aware that at present no such power exists in many districts?—No such power exists in the districts with which I am acquainted.

1878. Not even in the London district?—I believe not; some additional power should be vested in proper authorities, the nature of which it is not for me to point out, by which persons about to erect buildings should give sufficient security not only for the proper drainage of such buildings, but for the width of the streets, and to a certain extent for the interior arrangements of the houses, so as to provide the means of necessary ventilation.

1879. That is to say, that the form of the buildings shall be such as shall not be injurious to the health of the inmates, and of the neighbourhood?—Certainly.

1880. Further than that, you would not go in the interference, probably?—The proprietors of cottage-houses should also be compelled to provide suitable out-offices or privies.

1881. You refer to those conveniences the neglect of which would be injurious to the health of the inhabitants?—Certainly; it would also contribute materially to the prevention of disease and the promotion of the general health if some power were given to competent authorities to enforce whitewashing, and to remove such local sources of contagion and ill-health as may be pointed out to them.

1882. So that if fever was known to prevail in a particular locality, and the neglect of some useful precaution was found to keep up that fever, you would have some competent authority enabled to remove that nuisance, for the sake of the community?—Certainly.

1883. Mr. *Tufnell.*] You are of opinion that in every street the public should make a main drain, and the proprietors be obliged to make a sewer into that main drain?—By a main drain I not only include the great drains pervading the principal streets belonging to the public, but every drain which traverses an entire street; the construction of such would, in some instances, devolve upon the proprietors of houses to which they were rated; in other cases I conceive it would belong to the commissioners, or to the local authorities of particular towns.

1884. With regard to the expense which would be involved, supposing that no street could be formed of houses of an inferior description, without a main drain being brought through the centre, and drains from each house, would not that have the effect of checking enterprise and preventing persons building those houses?—I think the expense would never be such as to prevent legitimate speculation, and it strikes me that some check ought to exist to lessen the effects of the avarice and neglect of many proprietors.

1885. *Chairman.*] At all events, upon whomever the expense was cast, whether upon the proprietors or the public, or in different proportions on each, you think there ought to be such drains communicating with each house as would assist the health of the inhabitants and prevent their being injured by the neglect of cleanliness?—That is my opinion decidedly.

1886. Mr. *Baines.*] And this you think would be beneficial to all classes of society in a town, both to the richer and to the poorer classes?—The richer would participate both directly and indirectly in the advantages, as well as the poorer classes.

1887. The rich perhaps by being relieved from the danger of that contagion which is very often spread, owing to the deficiency of sewerage, and the poor from the comfort they would enjoy, and also the freedom they would experience from those contagious diseases?—Certainly.

1888. *Chairman.*] Do you not think that under proper regulations, either local or general, some system of inspection as to these matters, periodical or otherwise, would be necessary and right in order to take care that if the powers were given, they were properly put in force, for the security of the health of the inhabitants, and more particularly of the working classes?—I have often arrived at the conclusion, and the opinion has been strengthened by more recent observation, that the establishment of local boards of health in all communities of a certain amount of population, invested with certain powers to enforce sanitary rules, to obviate nuisances, and to inquire into the origin and history of epidemic diseases, would be a most important provision for the security of all classes of society; and I should strongly recommend that in any proposed legislation on this subject, powers should be given for the constitution of boards of health, and that to such establishments authority should be given to inspect those parts of such towns as were reported to be unhealthy, to visit the lodging-houses, and to take cognizance of all new causes arising which might prejudicially affect public health.

1889. Do you not think that the altered circumstances of the country, within these few years, and the vast increase of the population, more especially of the working classes, crowded as they are in many towns, calls most strongly for some system of inspection such as you have spoken of?—Most decidedly.

1890. Does not it consist with your information, having been an inhabitant of one of those towns, that, in consequence of a want of that system, the working classes suffer materially from the inconveniences referred to?—I am fully satisfied that they do.

1891. Under the present system, are not a great number of houses speedily run up by small landlords and others, with the purpose of making the largest possible gain, and without any reference to drainage or ventilation, or many of the circumstances most necessary to be considered for the health of the inmates?—Nothing is more common than the construction of large rows of cottages for the occupation of the working classes, on the principle of mere building speculation, and the object of interest on invested capital seems to be the only object which is contemplated by the projectors.

1892. Do you know of cases in which the neglect of the provisions which you have pointed out is notorious?—I know of many such instances.

1893. And where the inmates, in consequence, suffer the evils you refer to?—Certainly.

1894. Mr. *Baines.*] Do not you think that the establishment of boards of health would very much check that pernicious kind of speculation by which persons are huddled together in the unhealthy manner referred to, and by which their health is consequently very much impaired?—I think it would; and I believe that nothing less than the consciousness that parties were building under the eye of a competent and vigilant board of health, and the apprehension that gross evils and defects would by means of that board be brought before the public, would prevent the continuance of the present system, in which the health and comfort of the working classes are so frequently lost sight of.

Dr. *J. Williamson.*

6 April 1840.

1895. Would it not be very easy, in almost all those large towns, to form boards of health of that kind from the medical officers of the town who attend the infirmaries and other public institutions, and from the magistracy and police of the town?—It would; and I should propose that all regularly educated medical men, of a certain standing in such towns, should constitute the members of such boards of health, together with such parochial or municipal authorities as could conveniently be conjoined with them.

1896. From what you have seen of the disposition of municipal authorities and medical gentlemen who interest themselves in the public health, you apprehend that it would not be difficult at all to form such establishments?—I am quite convinced, from what I know of the medical profession, that they would most cordially support the formation of such boards of health, and diligently carry out their views; and the fact of the town council of Leeds having specially appointed a committee, still in existence, and expended several hundred pounds in obtaining information with reference to local nuisances affecting public health, is the strongest evidence of the interest felt by the municipal authorities on the subject of the health of the people.

1897. From your knowledge both of the profession, and of municipal institutions in other places, do you not suppose that what has been done in Leeds would be readily done in other places if there was a legislative sanction, and legislative encouragement given to such proceedings?—I am quite sure that there would be an efficient co-operation in other places if the necessary legislative power were given to secure the several objects of such boards of health.

1898. So that that altered state of society to which the Chairman has alluded, would be met by a corresponding disposition on the part of the authorities of those places, and the medical officers in those places, to put the towns on an improved system corresponding with that altered state of society?—I feel quite confident that it would.

1899. *Chairman.*] A general Act laying down proper regulations, which might be put into force by municipal or other local authorities, is what you contemplate?—Certainly.

1900. In which case general rules would be laid down, no further interfering with property than would be absolutely necessary for the benefit of the community?—Undoubtedly.

1901. Mr. *Tufnell.*] There has been a great deal of speculation lately in house building in Leeds, has there not?—There has been during the last 20 years.

1902. Particularly in houses for the poorer classes?—There has.

1903. Should you say that they were in an improved state, compared with the houses for the poorer classes built some time ago, or worse?—Some of the cottages are built upon decidedly an improved system; but I should not be justified in stating that there was any important improvement in the general style of cottage building.

1904. Are not the streets wider?—The streets are wide, compared with the alleys and courts, and the mode of construction so much adopted some years ago; and probably the width of the streets is not so much a subject of complaint as the absence of paving and sewerage.

1905. You consider the width of the streets to be an essential object with regard to ventilation?—Very important, certainly.

1906. So far there has been an improvement?—There has been an improvement in the width of the streets, but no corresponding improvement in other respects.

1907. Have many alleys and courts been built?—Some of the old alleys and courts have been rebuilt, but not with any increased width; and from the increasing value of land in many of the commercial towns, there is yet too strong an inducement to construct confined courts near the principal streets.

1908. *Chairman.*] In consequence of small spaces of ground becoming of more value in a densely-peopled town, is not there a temptation to build closer, and not to give that space which there would be, supposing it was in the beginning of a town?—Certainly.

1909. So that it seems probable that as towns advance in population, and in the value of the spaces left open, they will take less care as to the mode of construction, unless some authority steps in?—Just so; I understood the question to refer to the old alleys which have been rebuilt; in those instances there has been no attention paid to the greater width of such alleys or courts. The new

streets

streets which have been erected, which are not so much in the central or more valuable parts of the town, are wider; but, on the present system, these wider streets will eventually be deteriorated by the construction of confined courts in immediate contiguity with them.

1910. Mr. *Tufnell.*] You stated on Friday that the houses are in a very neglected state, and that there is no system of inspection; are you prepared to suggest any particular objects to which attention should be directed?—If it would not interfere too much with the liberties of the people, I should strongly recommend that lodging-houses should be under some species of local regulation, a certain class of them licensed, if possible, under the direction or with the permission of the magistracy; that all lodging-houses which afford accommodations at a certain minimum sum per night, should be annually licensed, either by the magistrates or under the direction of the guardians of the poor, and that such houses should be constructed on some plan consistent with the health of the inmates, and licensed to accommodate a certain number of persons only.

1911. Mr. *Brotherton.*] Would they be public institutions or private?—They would be as much public institutions as taverns or inns.

1912. Mr. *Baines.*] You mean that you would have an inspection by which care should be taken that persons were not crowded together in such a way as to be dangerous to the public health, as is too much the case in the town of Leeds and many other large towns you are acquainted with?—Certainly.

1913. You have spoken of cottages in the close part of the town, such as the-Boot-and-Shoe Yard in Leeds, and other places of that description, being very much crowded, and crowded in such a way as greatly to endanger the public health, particularly in times when epidemics prevail; has not that arisen in a considerable degree out of the altered state of the town? Formerly, when those buildings were erected, they were only inhabited probably by one family; now there are frequently ten or a dozen families crowded into one house which was originally intended as a dwelling for a single family; is not that the case?—That is the case.

1914. That you believe to be one of the things which ought to be under the superintendence of a board of health, or of some other institution which should guard against the dangers that arise out of that altered state of things in large towns?—Certainly.

1915. You spoke of cottages being now built in a more open situation, and the streets being wider; that is rather arising out of an altered state of population, than from any disposition on the part of the persons who erect those cottages to afford more healthy situations to the inhabitants?—Certainly; most of the lodging-houses with which I am acquainted are in the older parts of the town, and until within the last few years they were occupied, I believe, by single families.

1916. Mr. *Tufnell.*] The number of lodging-houses has increased?—Certainly the number of lodging-houses has increased.

1917. Have you ever heard the question mooted of the practice of licensing lodging-houses?—I never have.

1918. You would not have a licence refused if the conditions were complied with?—Certainly not.

1919. It would be obligatory on the magistrates to grant the licence?—Yes; I think they should be persons of good character, and there should be sufficient security afforded that the state of their houses would not be hostile to the health of the inmates. It would, probably, be better that the licence should emanate in the first place from some other authority, but that the magistrates should have the power of taking away a licence, sufficient proof having been offered of the unhealthiness of a house, or of the bad character of the keeper.

1920. You would have the regulations refer to whitewashing and cleansing?—I would enforce periodical whitewashing and cleansing, and such might be effected under the direction of a board of health.

1921. *Chairman.*] Do not you think that perhaps a better way to distinguish those houses than the amount which was paid, would be their being liable to contagion or disease, from the mode in which they were kept, so that the regulation would be general, that lodging-houses in which diseases were known to prevail, or had been found to prevail, should be under such regulations as you have referred to?—I fear that would be too vague an arrangement to be found practically beneficial. Besides, a lodging-house might become unhealthy from some accidental cause.

Dr. *J. Williamson.*

6 April 1840.

1922. Suppose, for instance, a house was found to have been visited by a fever, and that it had continually threatened the breaking out again there, that would be a sufficient ground for the board of health immediately taking steps for its being cleansed, and so on?—Yes, that would be important; but it would be still more effectual if you could place such establishments under those regulations which would prevent the introduction of contagious diseases.

1923. Suppose it to be a private house, in which due sanitary regulations were totally neglected, and fever was found to prevail from time to time, so that the inmates who came in one after another took the fever, would it not be proper that there should be some authority to require that that should be cleansed?—It would be beneficial if such authority existed; but I should be doubtful how far the permission to examine private houses would be generally acceptable. The class of houses to which I have particularly referred as lodging-houses, are those which are used chiefly by the vagrant and more destitute population, who are found in large numbers in the great towns, and by whom many of the most malignant diseases are imported and carried out again.

1924. Such a regulation would be, in your opinion, of great value to the health of the community?—I am quite satisfied that it would.

1925. That would be conducive also to the health of the humbler classes themselves, who are continually going into those places to lodge?—Certainly. It would be beneficial chiefly to the humbler classes, whose lives and health require the protection which such enactments would afford.

1926. Mr. *Baines.*] And not only in the particular town, but as those vagrants pass from town to town, it would be beneficial in other places as well as in the particular locality to which you refer, as they may be made the medium of carrying the contagion to other places?—Certainly.

1927. Mr. *Tufnell.*] Have you had an opportunity of observing whether the spread of malignant disorders has been greater in the town of Leeds of late than formerly?—Malignant disorders have within the last few years, I think, increased; for a few years previously there appeared to have been a diminution of malignant diseases; but, of course, such diseases vary periodically, and depend on other causes as well as on those of a local nature; their recurrence is not to be entirely accounted for by causes merely of a local nature.

1928. Do you consider a low diet as one?—Yes; and local nuisances, deficient drainage, or bad ventilation; epidemic diseases are often occasioned by the condition of the atmosphere and occult terrestrial influences.

1929. Taking the last 10 years, would you say that the physical condition of persons of this class was better or worse than it had been previously?—During the last 10 years it strikes me that the physical condition of such classes is somewhat improved; the number of cases of scrofula, and of chronic diseases generally, has diminished.

1930. Mr. *Baines.*] To what causes do you attribute that improvement?—The improvement which has taken place in the food and in the clothing of the inhabitants of the large towns, has, I have no doubt, partly contributed to such improvement; the practice of vaccination, which, though not general, is extensive, has also contributed in some degree. The diffusion of better information as to the causes of disease, and the formation of habits of temperance and providence, have co-operated to a slight extent.

1931. You think that the food and the clothing of the inhabitants has improved within the last 10 years?—My general impression is that it has, with the exception of the last year or two.

1932. *Chairman.*] Does that apply itself to all classes, or particularly to the humbler classes?—To all classes. There is one considerable class of operatives in the towns of Yorkshire with which I am acquainted, who have not presented that improvement in their health or circumstances which has been indicated in many other classes of the working people; I allude to the weavers, who furnish a large number of cases to the public medical institutions, and who generally present a very low condition of health.

1933. Mr. *Tufnell.*] But, upon the whole, notwithstanding the increase in the towns of the population, and neglect with regard to sewerage and drainage, you consider that the state of the health of the population in those towns has improved?—I cannot speak from any statistical data; but my impression is, that the health has improved rather than otherwise; and I think I have seen a decided diminution in chronic, those forms of disease which are principally connected with debility.

1934. *Chairman.*]

1934. *Chairman.*] Are you aware that the average mortality, taking the kingdom generally, has decreased, and that, with respect to London, there is a considerable decrease?—Certainly, I am. I am afraid there is no diminution in the amount of infantile mortality in the larger towns.

1935. Mr. *Baines.*] Are there not in the large towns more deaths in children under two years of age than in other parts of the kingdom, as far as you have had an opportunity of comparing them?—I have no doubt that there is a larger proportion of deaths in the large towns of children under two and under five years of age than in the rural districts, and this calculation is confirmed by the comparison of the statistics of several places.

1936. To what do you attribute that circumstance?—Many causes concur in producing that result; amongst others, the facility with which the contagious diseases of children are communicated in great communities; the impure state of the atmosphere in large towns; which seems to be peculiarly detrimental at the first periods of life; the inadequate attention which the children in large towns receive from their parents, and the fact that such children are frequently the offspring of dissipated or destitute parents.

1937. And probably, in part, to the mothers of families being employed more from home than they are in the rural districts?—Certainly; I include that under the statement of the want of sufficient attention of their parents, who are, in many instances, employed in factories.

1938. Suppose there was an establishment such as you have alluded to, a board of health, in the large towns, would not one part of their duty be to keep statistical accounts, by which you would be able, more particularly than you can at present, to mark the progress of health and disease, and thereby to take measures by which anything that was pernicious might be removed, and anything beneficial extended?—I believe that the institution of such boards of health would most effectually conduce to those purposes, and would be the means of ascertaining and accumulating many most important facts with regard to the origin and diffusion of epidemic diseases. In the course of a few years many most interesting facts relative to the influence on health of certain localities, employments, and social circumstances would be established, and many practical inferences of direct application formed.

1939. While infirmaries and fever hospitals are used for the purpose of curing diseases already existing, would not a board of health derive a great part of the advantage that you attribute to it from preventing disease itself?—Certainly, I believe it would have many opportunities of extinguishing the first principles of disease, when introduced into large communities, and save a great amount of wealth and prevent suffering to all classes.

1940. While those institutions to which you have alluded, that is fever hospitals and infirmaries, are attended with considerable expense to the more opulent part of the inhabitants, would not great economy arise from the establishment of boards of health, by preventing in the first instance those diseases ever occurring?—Certainly; and such boards of health would be especially useful in obtaining from the various medical institutions in places with which they were connected, proper registers of the various diseases prevailing at different periods, and in different situations and professions; and the existence of such boards of health would afford the means of sanitary precautions, and thereby much pecuniary saving would accrue both in the prevention and cure of disease.

1941. Mr. *Tufnell.*] Are you aware that in London a regulation exists of sending the pauper children to a school out of town?—I am, and I have had the pleasure of visiting that school at Norwood.

1942. There is no regulation like that prevails in any town that you are acquainted with?—I am sorry to say I know of no similar school.

1943. Would you think that a salutary regulation?—It would be a most beneficial and humane regulation, if it could be adopted in relation to every large town.

1944. Do you see any reason why it should not be adopted in such towns?—I cannot see the least objection, and I believe that there could be no difficulties in the adoption of such a plan in connexion with most large towns.

1945. Either with regard to the conduct of it or the expense?—Certainly.

1946. Mr. *Baines.*] Such an establishment conduces both to health and education?—The effect of such an establishment must be permanently to improve the physical condition of a class of persons remarkable for their stunted growth and feeble stamina, and effectually to instruct their minds.

Dr. *J. Williamson.*

6 April 1840.

1947. And to elevate the character of persons in the humbler walks of life? —Certainly, and to render apparently the most hopeless and unpromising members of society useful and moral persons, to lay the foundation of future happiness and virtue in the sound principles of religion, and to qualify for the duties of life by instructing them in various trades.

1948. You have said, that, supposing boards of health to be established in the large towns, benefit would arise in the various ways you have described; and you have also alluded to the advantages that would arise from the collation of the reports made by the different officers of those boards of health, and the way in which those collated reports would be made conducive to the public health; do you think that would be an advantage of considerable magnitude? —I am quite sure it would be an advantage of the highest importance, not only to the health of great communities, but to the general interests of medical science. The study of the statistics of life is yet in its infancy, and can only be effectually advanced by a systematic examination and record of the causes and modifications of disease in many different situations. I stated that cottages have within certain districts of the town improved; I wish to state the points in which they have improved. Most of the new cottages are cellared; and therefore, when the lower parts of the houses are used not as sleeping-rooms, they are more favourable to the health of the inmates than those cottages which are without cellars, and where the inhabitants sleep on the ground floor. With regard to their being built more slightly than the older class of cottages, I think it is extremely probable that such is the fact; that while the rooms are more spacious, and are provided more frequently with cellars, they are of a less expensive construction in other respects.

1949. Mr. *Tufnell.*] Does that affect the health of the cottages?—Probably it affects the health less than the want of cellarage, coupled with the more limited space.

1950–51. Mr. *Brotherton.*] Do you not think it desirable to discourage the living in cellars?—There can be no doubt that those who live in cellars are more directly exposed to malaria of all kinds; and, if possible, the poor should be prevented, or should be discouraged rather, from living in cellars.

Mr. *John Ellison*, called in; and further Examined.

Mr. *John Ellison.*

1952. *Chairman.*] YOU have stated that you are well acquainted with Bradford; what is your opinion with respect to the comparison of the dwellings of the poorer classes now with what they were formerly?—They are much worse than they were formerly. Forty years ago, within my own knowledge, for I am now upwards of 50, cottages were built much more with a view to the comfort of the inmates, and much more with a view to stability than they are now. Plots of building ground which could be bought, 20 years ago, at half-a-crown a yard, are now letting at 7 *s.* 6 *d.*, 200 per cent. more than the price 20 years ago.

1953. The land has become dearer, and the cottages worse?—Yes. In order to make the cottages pay a good per-centage they are obliged to run them up in a slight way, or they would not pay. They have also built them in situations where they would not have built them 20 years ago, in consequence of the ground increasing so much in value.

1954. Mr. *Brotherton.*] Are the cottages in Bradford worse than the cottages in the other manufacturing towns?—I cannot answer that question; they are much worse than they were 30 or 40 years ago.

1955. Mr. *Baines.*] Do not you think that if there were regulations, such as those adverted to in the evidence of Dr. Williamson, by which the sewerage should be better secured than it is at present, and there were those rules for the erection of cottages which he has recommended, that would prevent those bad cottages from being erected, and that in consequence of that, in Bradford, as in other places, you would obtain a better character of cottages?—Yes; I have stated that distinctly in my evidence.

Dr. *James Simpson*, called in; and Examined.

Dr. *J. Simpson.*

1956. *Chairman.*] YOU reside at Edinburgh?—I do.

1957. Will you be kind enough to give to this Committee a statement on one point, on which you complain, of a nuisance having been created lately by the use of water from the common sewers, for the purpose of irrigation in the immediate vicinity of that great town; is that the case?—Yes; it has been a very great

great cause of complaint, both in the community, and of the medical profession of Edinburgh, that such use of the foul water is made, as, in the opinion of medical men, injures the health of the inhabitants.

1958. The medical men are of opinion that it is highly injurious to the health of the town?—Yes; the majority are of that opinion; there is a difference of opinion on the subject, but that is the opinion of the majority.

1959. Is it exceedingly unpleasant?—Yes; there can be no doubt of that; some of the strongest men in the precincts complain of sickness and vertigo being felt when they are subjected to the nuisance.

1960. Is this in the immediate vicinity of the town?—Yes; it is within three miles round the town, east, west, and north.

1961. Is it extending?—Yes; some years ago it was only over a comparatively small part of one or two estates, but now every landlord round the town is taking advantage of it for his own purposes.

1962. It increases the value of the herbage considerably, probably?—It increases the value of land considerably, almost to an incredible degree; there is some land in the vicinity of Edinburgh which was set a few years ago for a very few pounds an acre, now let as high as 30 or 40 pounds a year, and some even above that in small lots.

1963. You state that it is injurious to the health of the inhabitants, and also interferes with their comfort; is there any power at present of preventing its continuance and extension?—None whatever; the case was submitted to some of the best lawyers at the bar in Edinburgh, and they gave it as their opinion that with the present Police Act it was impossible to interfere; that nothing could be done without an Act of Parliament.

1964. Is there a general desire for some legislative authority for the prevention of this nuisance to the inhabitants of Edinburgh?—A very general desire indeed.

1965. In some parts of India rice grounds are prohibited in the vicinity of large towns?—Yes; and it is not only the health, but the comfort of the inhabitants also.

1966. Mr. *Tufnell.*] Has this been lately introduced?—It has been principally introduced within the last 20 years; it was to some extent before that.

1967. Is it now increasing?—Yes, it is to such an extent that in some localities I have known persons avoid going particular roads to keep out of the way of it.

1968. *Chairman.*] The authorities of Edinburgh have reported against this, have they not?—Yes.

1969. They are almost unanimous against it as a great evil, are they not?—They are.

1970. Is there any point respecting the subject the Committee are upon, of the regulations for the sanitary condition of the inhabitants of large towns, which you would suggest?—I should say, with regard to Edinburgh, the working classes have to complain chiefly of the changes which have been introduced lately by the irrigation of lands; for example, they have the power at present of going over the King's domains there, the royal palace of Holyrood; but the stench there is so dreadful that they cannot go except on particular days.

1971. Mr. *Ponsonby.*] Are the same regulations as to the irrigation pursued within the royal domains?—They are.

1972. Under whose direction?—The Earl of Haddington's.

1973. He is the keeper of the royal park?—He is; they have to shut the windows in the vicinity on particular days.

1974. *Chairman.*] Is there any circumstance respecting the sewerage you would state?—There is one circumstance, the dreadful degree of filth, particularly in the houses where a number of strangers are lodging. I know of one house where a fever has been raging, and in which one of the floors, the inhabitants living in floors, is occupied by no inhabitant, but the inhabitants above and below deposit everything filthy there, so that there is an accumulation of several feet of filth.

1975. Fever has been raging in that house?—Yes, and in the district round; in all the closes round.

1976. Is municipal regulation necessary for the cleansing of those places?—Certainly.

1977. Do you think a good system of inspection would be valuable?—Most assuredly, it would be of immense use.

 1978. Such

Dr. *J. Simpson.*

6 April 1840.

1978. Such a system of inspection and regulation, by preventing fevers and other contagious disorders, would be a saving ultimately of expense to the rich inhabitants?—I think it would be; and the Fever Board at Edinburgh press the subject of ventilation, and the cleansing out of the houses of the poorer classes with that view; when fever is complained of, the house is cleared out and whitewashed.

1979. Have you power to do that?—No; in many instances they will refuse to let it be done.

1980. You think a power to carry that arrangement into effect would be important?—Most assuredly. I would state that in the late discussion with regard to this matter, before the Commissioners of Police, the contrariety of opinion was such that they found it difficult to arrive at anything like the truth. I thought the best test of the salubrity or insalubrity of this irrigated land was to ascertain the state of health of the troops at Piershill, the cavalry barracks, near Edinburgh, and the result was, I took Mr. Tullogbis' report of the sickness and mortality in all the cavalry stations for seven years, published lately, and I took the mortality and sickness at Piershill, as I found it in the adjutant-general's office, for seven years; and I found that the admissions of the cavalry soldiers connected with these barracks, as compared with the soldiers in barracks throughout the kingdom, was greater in the proportion of 10 per cent.; I infer that it was from that cause, because I could find no other.

1981. In the thickly-peopled districts of Edinburgh, are there any common sewers open?—Not in the town itself, but immediately in the suburbs; and it is the foul water from those ditches which is sprinkled over the land to irrigate it.

1982. Are the sewers in the immediate vicinity of the town injurious to health from being left open?—Certainly, but not so much the sewers as the fact that the water of the sewers is spread over the land by the system of rose draining; it is taken away, and allowed to ooze through.

1983. It passes along, giving out a most mephitic odour all the way?—Yes.

1984. Mr. *Tufnell.*] Is this for market gardens?—No, for grass; it is cut two or three times a year. I have one patient who was carried into an adjoining house where it crosses fainting, and who did faint.

1985. Has there been any petition from the inhabitants of Edinburgh against this practice?—I have heard them bring it forward to Mr. Macaulay, their member; but I am not aware of any petition to Parliament. The same practice prevails in other Scotch towns; for instance, round Crieffe; the practice has been imported from Edinburgh.

1986. With the same unpleasant effect?—Yes, and the impossibility of persons taking the air after a certain hour at night; that is out of the question in consequence.

1987. It is principally where there is low land, perhaps?—Yes, and that prevents their getting rid of the water.

1988. Have you heard of any consultation, or reference to the opinion of medical men, with regard to the evils of this practice to the inhabitants of the royal palace?—Lately, about two years ago, the Lord Advocate asked the opinions of the surgeons and physicians of the Queen for Scotland, with reference to the health of Holyrood in consequence of this practice, and they gave it as their opinion that it would not be a fit habitation for Her Majesty on that ground.

1989. Mr. *Baines.*] Did the matter rest there, or were there any steps taken in consequence of that opinion being given?—There were no steps taken.

1990. That is two years ago?—Yes, it is.

John Riddle Stodhart, Esq. called in; and Examined.

J. R. Stodhart, Esq.

1991. *Chairman.*] YOU are Treasurer of the city of Edinburgh?—I am.

1992. The Committee have had narrated to them a great evil to the inhabitants of Edinburgh, arising from the making use of the filthy water from the common sewers, which, it is stated, is used in the immediate vicinity of Edinburgh for irrigation, to the great discomfort of the inhabitants, and the injury of their health; is that the case?—Yes, very greatly to the discomfort of the inhabitants. I am not a medical man, and therefore not able to speak particularly to the prejudice to their health, but it is very prejudicial to one's senses; in taking a walk out of town in the hope of breathing a pure atmosphere,

sphere, we get into a most disgusting stench; the olfactory nerves are affected most unpleasantly.

1993. The medical men consider it as injurious to health, do they not?—Generally, I should say, they agree that it is prejudicial to health.

1994. Is this a practice which has increased much of late years?—Very much.

1995. Does it prevail in the royal domains of Holyrood, as well as in other parts?—Yes.

1996. That is a place to which the inhabitants used to go out for air and exercise?—Yes. It was formerly a park occupied by cows; now it is irrigated in this filthy manner, and grass is grown upon it.

1997. Does that interfere with its former use?—Yes, and with the comfort of the persons in the neighbourhood.

1998. Mr. *Baines.*] How long has this practice prevailed?—It has prevailed some years; but it has increased ten-fold within the last 10 or 15 years.

1999. *Chairman.*] You consider that you have no legal remedy at present?—We consider that we have no legal remedy.

2000. Mr. *Baines.*] Have any efforts been made on the part of the inhabitants to put it down?—There was a great effort made the last time we were before Parliament for the Police Bill, but the Earl of Moray determined to oppose it with all his power and influence in Parliament, and it was supposed it would lead the city into so great an expense, the clause was abandoned, and we have no power to put it down.

2001. In what year was that effort made?—Within these six or seven years.

2002. Mr. *Tufnell.*] If the nuisance is so great, can you explain why there should be no petition on the subject?—It has attracted a great deal of notice. I do not know that they have petitioned. I presume it is the great expense which they fear they should be involved in by putting it down.

2003. *Chairman.*] Do you think a great majority of the inhabitants consider it a great nuisance and a great evil?—Certainly; it is a real evil, and generally complained of.

2004. Mr. *Baines.*] Are there any dwellings built in the neighbourhood of those fields?—There are few or no dwelling-houses built recently in the neighbourhood; there are dwelling-houses standing in the neighbourhood which existed prior to the nuisance being brought to them; they are houses of an inferior description. These irrigated meadows are chiefly in the suburbs; they are at no very considerable distance, I should say within a mile of some of the principal houses in Edinburgh.

2005. None of the owners or occupiers of those houses have taken any steps in order to put an end to the nuisance?—I am not aware, except in a case which was brought into court some years ago, of any effort.

2006. Mr. *Tufnell.*] From what you state, the nuisance is generally felt by persons walking out of the town more than by the inhabitants of the town?—Yes, the strength of the odour gets dissipated by the time it reaches the town, but it is a very general opinion that in the lower parts of Edinburgh, the south back of the Canongate, the north back of the Canongate, and other parts, the salubrity of the air is very much affected by this exhalation.

Mr. *James Peeke,* called in; and Examined.

2007. *Chairman.*] YOU are Surveyor of the Tower Hamlets, division of the Sewers?—Yes, the Commission of Sewers for the Tower Hamlets, excluding St. Katherine's and Blackwall Marsh.

2008. Is Bethnal-green within your district?—Yes.

2009. Are Lamb's Fields within your district?—I do not know them by that name.

2010. Virginia-row?—Yes, that I think is.

2011. The Committee have an account of the state of Virginia-row being very dirty and filthy, and in great want of sewerage; do any of your sewers go up Virginia-row?—I think not; a vast deal of that dirt and filth depends on the scavengers more than the sewers.

2012. It is stated to the Committee, that "in a direct line from Virginia-row to Shoreditch, a mile in extent, all the lanes, courts, and alleys in the neighbourhood pour their contents into the centre of the main street, where they stagnate and putrefy;" is that the case?—I perceive by an inspection of the plan

Mr. *James Peeke.*

6 April 1840.

plan that there is no sewer about Virginia-row; there is none nearer to it than Princes-street.

2013. It is stated that in some or other of those houses fever is always prevalent; do you know the district so as to be aware whether that is the case?—I cannot speak as to the state of the inhabitants; I know it is very wretched. The whole of this land was excavated for brick-making, and has been reduced to an unnatural level, so that the sewers are hardly available. I believe many of those houses have ditches round their gardens, and flowers, and roots, and stems are thrown into the ditches, where they remain and stagnate; we are working up, and shall be able to get the sewer in some parts five feet lower than it was.

2014. It is stated to the commissioners that in Whitechapel parish, Essex-street, and its numerous courts, as Martin's-court, Moor's-court, Essex-court, Elgar-square, George-yard, and New-court, Crown-court, Wentworth-street, and many parts of that street, there is no sewer passes up?—There is none.

2015. Are the people very much in want of some mode of cleansing in consequence?—It is the filthiest place which can be imagined.

2016. It is thickly inhabited?—Yes, very densely populated.

2017. How is it with respect to Pearl-street and Little Pearl-street?—It happens that one-half of Pearl-street belongs to me. I only know that in those houses which belong to me there is no fever; the sewer comes to Little Pearl-street.

2018. There is none along Great Pearl-street, nor up Little Pearl-street?—No; but there are underground drains.

2019. It is stated to the Committee that in Lamb's-fields there is a receptacle for water, which is stagnant?—Yes, it is an entire morass; it belonged to a person of the name of Green; he excavated it, and made bricks. The Eastern Counties Railway passes through it, and they are now filling it up.

2020. Supposing any rows of houses should be built in this district, what power have you with respect to sewerage; do they apply to you first?—They apply to the commissioners.

2021. When they do apply to the commissioners, do the commissioners take steps upon their application?—It is brought before the court of sewers, and the question is considered.

2022. Who pays the expense, supposing the new sewerage to be adopted?—In a case of that kind, unless it could be shown that a public benefit could be derived, that the sewer could be extended for the good of the public, I suppose the commissioners would refuse it altogether.

2023. Suppose it is thought, upon the whole, that some benefit would be derived to the public, is a portion of it undertaken by the commissioners?—In some cases the proprietors have paid the whole of the expense; in other cases, where the public would receive a benefit, the commissioners have borne a part of the expense.

2024. Have you the power of preventing the making receptacles for filth below the level of your common sewer?—Certainly not.

2024*. Have you the power to compel communications from the houses to your sewers?—Certainly not; there are instances where sewers have been laid down to the extent of 5,000 feet in length, and there have not been 50 applications to communicate, though they have come opposite the house, and the owner might have availed himself of them.

2025. It is a fact that in the case in which the advantage is given by means of a sewer being formed, it is frequently not taken advantage of?—Certainly.

2026. Do not you think some power of that kind would be desirable?—I do not think it could be enforced, on account of the poverty of the neighbourhood; it would be running away with the whole value of the property, in many instances.

2027. Do you think if the sewer went immediately opposite to a man's house, it would be running away with the whole value of the property to oblige him to have a few yards of drain to communicate from that house to the sewer?—I am sure, in many instances, that would be the case.

2028. Do you not think that the want of such provision is very injurious to the health of the inhabitants?—I do not think that sewers have the effect which is attributed to them.

2029. You disagree with the medical men who think that the neglect of this underground drainage is prejudicial to the health of the community?—I cannot

see

see how, if they have a good surface drainage, they can be improved by an underground drainage, in nine cases out of ten.

2030. Mr. *Patten.*] Are not the sewers very beneficial in promoting the cleanliness of the neighbourhood?—I conceive that cleanliness is the great thing; the people are most intolerably filthy; they are the lowest description of Irish, many Germans, and many Jews, and they are, of all the people in the world, the most filthy. Bell-lane, Wentworth-street, was one of the points mentioned; in Bell-lane there is a sewer running to Wentworth-street, the whole length of Bell-lane, that is as filthy as it possibly can be; but there is another running through Frying-pan Alley to Nightingale-lane, and there are sewers passing directly through the centre of the street.

2031. Are there communications from the houses to the sewers?—There are in some cases.

2032. Mr. *Brotherton.*] Are there sewers passing through the principal streets?—Not invariably so; the commissioners are endeavouring as fast as they can to lay down new sewers in all the great thoroughfares: we call them rather outlets; they are places to afford collateral opportunities for drainage; no benefit can accrue without them to the public.

2033. Have the persons who erect houses near those sewers the privilege of draining their water into the sewers without leave from the commissioners?—Certainly not.

2034. It is necessary to obtain leave before they make the communication?—Undoubtedly.

2035. If they do make the communication without asking leave of the commissioners, they are liable to a penalty?—Yes; I have an order to stop them.

2036. If you conceive that it would require a compulsory Act to induce them to make the communication, upon what grounds do you make it necessary for them to obtain leave from the commissioners before they make the communication, and subject them to a penalty if they make the communication with the sewer without leave of the commissioners?—They have nothing to do but to apply to the commissioners of sewers, which is referred to me, and if there is no objection to it, I write a letter, and upon that they go to the office of sewers and pay 17*s.* 6*d.* for the first three feet of sewer; and they do that for this reason, if they were not to resort to that measure the sewers would be destroyed; every one would make a hole into the sewer.

2037. What sum have the parties to pay for making that communication?—There is no expense attending it at all; they do it themselves, of course.

2038. *Chairman.*] How much does it cost?—That depends upon the length; perhaps 2*s.* or 3*s.* a foot.

2039. Mr. *Brotherton.*] The owners of property have nothing to pay for the privilege of communicating with the main sewer?—No, there is every facility afforded them.

2040. *Chairman.*] All they pay is for the doing of it?—Certainly; we do not suffer them to put in less than 12 inches diameter; sometimes they put in 15 or 18.

2041. You state that there are several of those districts in which the sewers go up a street where the inhabitants neglect to take advantage of them?—Certainly.

2042. Have there been any instances in which one side of a street that took advantage of them became healthy, and the other side which neglected to take such advantage remained unhealthy?—Certainly not.

2043. You do not think that it is a great advantage for them to communicate with the sewer?—I think an abundance of water and cleanliness is of the utmost consequence; I apply that to the place alluded to, Essex-street, and so on, there there is surface drainage.

2044. When the sewers come near enough, do you not think it of great consequence that they should communicate with them by underground drains?—I think good drainage is advantageous always.

2045. If it is advantageous, you think that the want of it where sewers do not come is a disadvantage?—Yes, in a degree, certainly.

2046. In what way is your rating put on?—It is upon the whole district, but I am not competent to speak to that; I have nothing to do with it; the district is divided into levels, and each level bears its own expenses.

2047. Is it a regular pound rate throughout the whole of each level?—Yes.

 2048. The

Mr. *James Peeke.*

6 April 1840.

2048. The houses situated in the streets in which there are no sewers pay an equal amount of rate with the houses situated in the streets in which there are sewers?—Certainly, there is no distinction.

2049. Mr. *Patten.*] You rate the owners of the level once in so many years, do you not?—Yes; it does not exceed once in three years, generally.

2050. Is the rate collected immediately it is made?—Yes, immediately.

2051. Do you know how the funds are kept?—I only know that they are kept in a regular and proper manner by an accountant; there are separate accounts for each level.

2052. When that money is expended there is a fresh rate made?—Yes.

2053. The Committee understand that there is a regular increase of sewers in that district?—Yes.

2054. In what manner is that provided for?—When there are applications of parties they are referred to me for my report.

2055. Do the commissioners of sewers originate any of the sewers on their own judgment?—This very plan was filled in by me to suggest where it would be desirable to make fresh lines, and this plan was prepared in consequence, and all these red lines laid down by me, some of which afforded additional drainage, and others the opportunity of abandoning old sewers which ran through private property or were open.

2056. Have you any calculation of the extent of sewerage in the red lines?—I think there was very little short of 25,000 feet laid down.

2057. What time did you allow for the execution of this?—It was in the year 1834 or 1835; we are going on with it; four-fifths of these sewers comprised in my report are finished.

2058. Is the quantity of sewerage done in each year about equal?—No; sometimes more and sometimes less.

2059. Dependent upon what?—In some instances, upon our funds; there are two or three we are proceeding with, because we happen to have more money than we had three years ago; there is a balance in the bank now, in consequence of the rate which has been lately collected.

2060. Mr. *Brotherton.*] Is the rate payable by the owners of the property or the tenant?—It is an owner's tax; if a tenant-at-will pays, he deducts it from his rent, and that is put upon the receipt.

2061. Mr. *Patten.*] These 25,000 feet, you say, began in the year 1834, and you say three-fourths of it is done: do you calculate that the rest will be done with proportionate speed?—Yes, there is no doubt of that; and more so, we were four or five months of that time without any commission at all. The last commission expired on the death of William the Fourth; our commission ceased, and it was retained in the Court of Chancery, or somewhere or other, for four or five months, before we got another. During that period there was no authority to carry on works; then it takes a considerable time to get them laid out. We have a jury, which is a very troublesome mode, and very expensive.

2062. *Chairman.*] You survey those sewers, to see that they are going on properly?—Yes.

2063. You consider it your duty to report, if there is anything stagnant, or anything going wrong, the necessity of its being looked to, do you not?—I should immediately proceed, but not in the case of anything stagnant; if I found any of our sewers obstructed, or there was any stagnant water which was caused by a deficiency in our sewers, I should immediately remedy it.

2064. Do you consider it your duty to alter a sewer, or carry up a sewer, with reference to the health of the inhabitants?—Certainly not.

2065. Any alteration in the form of the sewerage, or any change respecting it, is with reference to property, not with reference to the health of the inhabitants?—Certainly.

2066. Mr. *Tufnell.*] When a certain line of sewers has been approved by the commissioners, do you lay the rate for carrying them into execution?—No, not for that.

2067. On what principle is the rate laid?—There are certain contingent expenses, and there are sums of money which will be required for carrying works of this description into effect; the commissioners then determine whether it shall be a sixpenny or a ninepenny rate, and those works are carried out progressively.

2068. They do not levy a rate to carry on a whole line of sewers at once?—No, they raise a rate, and apply the money in reconstructing old lines, or in forming new lines, that are most necessary; there the health of the people is taken very much into consideration; for instance, that is the reason why the sewer in Rosemary-lane was put in; it is the most filthy place which can be imagined; that is 1,500 feet in length.

2069. Mr. *Patten.*] Do you not think that, under an annual rating, when the rate fell very lightly upon the property, a larger system of drainage might be carried on than if it is rated only once in three years?—No, I do not think that would be more beneficial.

2070. Mr. *Brotherton.*] By levying your rates once in three years, does not a great deal of property escape during two years?—No, for it is collected in the course of 12 months.

2071. Suppose you levy a rate for three years at the present time, and property is being erected at the end of the first year, would that property be rated till the next?—It could not, of course.

2072. Then of course it would be two years and a half before any rate was made upon it?—Yes.

2073. If you made an annual rate, that property would come in in the following year?—Yes, undoubtedly. With regard to open sewers, as far as health goes, in this division of our district there is about 5,000 feet of open sewers in Whitechapel, Mile-end New Town, and so on; and in Hackney, which is one of the most healthy districts, we have more than three miles of open sewers; it is the filth of the inhabitants, more than anything else, which affects their health.

2074. A preceding witness stated, that at the end of all the drains towards the Thames there are valves, but, notwithstanding those valves, the tide on certain occasions comes a considerable distance up the drains?—It never can, unless something like an accident occurs. We have a sluice-keeper; his business is to go and to attend to those valves just before the rise of the tide, and to keep them clear; if anything comes down just before the valves are closed, they may be kept open, but in general they are effectual.

2075. When the tide has got into a sewer, is there any permanent disadvantage?—No; in some parts at Wapping the pavement is five feet below the high-water-mark of the Thames.

2076. Mr. *Tufnell.*] You, first of all, propose a certain line of sewers to be constructed, the commissioners approve of those, and then it rests with your discretion what part of it shall be done in each year?—No; the commissioners require me to state, when a sewer or sewers are done, which is the next to be carried into effect.

2077. The order of it rests a good deal in your discretion?—Yes.

2078. There is a general balance in the hands of the commissioners to carry those works into effect?—Yes; they cannot do it without money.

2079. Mr. *Patten.*] Do you not think that a rate collected more gradually would be less objectionable in the districts through which it went?—I think that if it were collected annually, it would be very good; but it must be an equal pound-rate over the whole district; it ought to be like the highway-rate, but I do not think it would be, upon the whole, better; that would lead to its being continually coming forward.

2080. Mr. *Tufnell.*] You said there has been a great deal of ground excavated?—Yes, in various places; in Hare-street Fields, for instance, seven or eight feet, probably all the natural surfaces removed; all the brick-earth, and all the gravel they could get out, till they got to the springs, then they left it in holes.

2081. In consequence of the excavation, is that ground wet and marshy?—It is nearly all built over now; but the ground cannot be so good, of course, for building on.

2082. Are there any excavations of that nature going on now?—There are some belonging to Mr. Rhodes, at Hackney; he puts in the sewers himself.

2083. The excavating the ground, of course, renders it difficult to form the sewers afterwards?—Yes.

2084. It is therefore a public nuisance?—Certainly.

2085. But there is no power of preventing it?—No, we cannot interfere with the freehold.

Mr. *J. Newman.*

6 April 1840.

Mr. *John Newman,* called in; and Examined.

2086. *Chairman.*] YOU are surveyor of one of the districts of sewers on the Surrey side of the river?—I am, for the Eastern District.

2087. Is there, in that district, a considerable number of houses of the poorer class?—A great many.

2088. Do your sewers run near to them?—Yes.

2089. Have you any power of obliging the owners of the houses to communicate by underground drains with the sewers, when they are made?—I am not aware of any.

2090. Is there any power to prevent their sinking cesspools and receptacles for filth below the level of the sewers?—No.

2091. Have you a regular pound-rate throughout the whole level?—That I do not know.

2092. Do you know whether they raise the same amount on the several houses within the district?—I have reason to believe they do, but I cannot speak with certainty to that.

2093. Do you know that many of the owners of those houses do neglect to communicate by underground drains with the sewers?—They do.

2094. In consequence of that, is there not a great deal of dirt and wet, and noisome stench, and so forth, in their premises?—Certainly.

2095. Must not that be productive of evil to the inmates of the houses?—Certainly.

2096. Is it not desirable that there should be lodged in some authorities the power to compel the persons owning those houses to communicate by underground drainage with the sewers?—I think that would be very desirable.

2097. That would promote the health of the district?—Unquestionably.

2098. Is it not the fact that the owners of those houses, get what they can for their houses, and do not care about these matters?—So long as they get their rent, they do not care about these matters.

2099. Are you aware whether there has been much fever in your district?—I fear the cholera was extended in the district in which I live in consequence of the filth of the district; I know there were 30 or 40 persons living in houses in the filthiest state.

2100. Are there open sewers passing through the district in which those houses are?—Yes, close to them.

2101. Would it not be for the advantage of the public if those could be covered over?—Yes, certainly.

2102. Mr. *Tufnell.*] What is the extent of your district?—My own district extends from near London Bridge to near Ravensbourne, near to Deptford, including the parishes of Bermondsey, and Camberwell, and so on; in the parish of Camberwell, about two years ago, we constructed a sewer nearly a mile and a half in length, on the urgent application of the inhabitants, the tenants of the houses; but I have received only one application from all those houses, extending a mile and a half, to make an opening into the sewer.

2103. *Chairman.*] Do you believe that is the only application that has been made?—It is the only application which has been made along the whole mile and a half.

2104. It would be highly desirable, for the health of the district, that there should be a power of compelling those communications being made?—I should say so, certainly.

2105. Mr. *Tufnell.*] Then the only drainage the other houses have is a surface drainage?—They have a sewerage in the rear; we wanted to do away with that and have a number of openings to the sewer.

2106. Do you think that the indisposition is on the part of the landlords or the tenants?—The tenants are very unwilling; and unless they have very long leases of their property, they seldom do make those applications.

2107. When the new sewer was made, was it contemplated to stop up the open drain behind?—No. There would be vast difficulty in doing that, inasmuch as no persons could interfere with their draining into that open sewerage, without doing injury to the parties.

2108. *Chairman.*] Could not you cover it over?—Yes.

2109. Mr. *Tufnell.*] Who applied to have this sewer made?—The owners of the houses on each side of the road.

2110. Having applied for it, they have not availed themselves of it?—They have not.

2111. *Chairman.*] You have stated that it would be a very great advantage to them; are there in your district many rows of houses in populous districts in which there is no sewer at all?—Yes, a great many.

2112. And no underground drainage at all?—No.

2113. Have you any doubt that underground drainage is very conducive to the health of the inhabitants?—There can be but one opinion upon that point.

2114. Mr. *Tufnell.*] When this application was made to have this sewer made up the road, why was not it thought best to cover up the open sewer?—Because we thought that by making a sewer in the road we should be able to accommodate both sides of the road. The old sewers are on a very high level. The new sewers are constructed on a very low level, so as to give them the advantage of draining their basement stories.

2115. *Chairman.*] The basement stories still remain below the level of the drain which is used?—Yes, they do.

2116. What is the general rent of the houses along the Camberwell-road?—The houses from Bethel's-bridge to Camberwell-green, on the average, 60 *l.* and 70 *l.* a year.

2117. If that is the case with the owners of houses of that size, that they feel an unwillingness, is it not likely that there will be an increased unwillingness on the part of the owners of houses of the poorer classes?—I have generally found from experience that the owners of the houses of the poor are very unwilling to do anything; as long as they get their rent, 2 *s.* or 3 *s.* a week for a cottage of one single room, they care very little about the state of the sewerage.

2118. Do you think that under the present regulations the state of those poorer houses is very much neglected?—Very much, indeed.

2119. To the great injury of the inhabitants?—Yes; we brought up the Camberwell sewer to a certain point in order to drain a pond on Camberwell-green, a stagnant pond; it was placed within reach of the houses adjoining to make a drain from that pond into the sewer, but we have not been able to prevail upon them to do it.

2120. It appears that what is everybody's business is nobody's business, and that this, which was a necessary thing to be done for the health of the neighbourhood, is wholly neglected, because there is no proper authority to compel them to do it?—Yes.

2121. To the injury of the district?—Decidedly; that pond is very injurious to the health of the district, in my opinion. There are one or two points which are rather remarkable: in the parish of Rotherhithe there are no waterworks, and all the water the inhabitants get there is generally from the sewers; into those sewers all sorts of filth are thrown in; we cannot get men of property to come forward to make new sewers in that district; they say, if you sink them deeper we should lose the water, upon which they depend, in consequence of waterworks not being established in that district.

2122. A supply of good water is very much wanted?—Yes, decidedly.

2123. Mr. *Tufnell.*] Has any other line of sewer, except that at Camberwell, been lately perfected?—Yes, a great many.

2124. Have persons generally not availed themselves of them?—No; there is another sewer which goes through a very populous district; the inhabitants there are very glad to avail themselves of the opportunity of emptying into that sewer.

2125. *Chairman.*] In this district have you found a willingness to avail themselves of the sewers?—Yes.

2126. Mr. *Tufnell.*] This sewer must have been constructed at a very great expense?—Yes. Our district is in a very bad soil: there are quicksands, and it becomes very difficult to construct sewers in such a soil; and, therefore, there is more expense incurred in consequence. We are obliged to adopt cast-iron bottoms to construct them at that low depth.

2127. Can you account for the fact, that the inhabitants of this district should have applied for the construction of this sewer, creating a rate upon the district,

Mr. *J. Newman.*

6 April 1840.

trict, and then not have availed themselves of it?—Being carried down to so great a depth, it has an effect in draining the district. Immediately that the sewer was constructed, all the wells about were dry; that shows that the surrounding surface was improved by the new sewerage, and perhaps those houses were a little benefited by that.

2128. *Chairman.*] Your observation as to the neglect of the occupiers of houses, and particularly of those let to the poorer classes, to make improvements in the district, extends in a greater or a less degree to the whole of the populous district within your survey?—I think so.

2129. In your opinion, additional powers are necessary?—Decidedly so. I am about to execute a sewer 900 feet in length, surrounding the property of Guy's Hospital; they applied to the Board for leave to arch it over; that was immediately complied with, they paying two-thirds of the expense, the other one-third being paid by the commissioners; inasmuch as we ascertained, from the depth of the sewerage, the neighbourhood would be benefited, it was thought that the commissioners should pay the difference in the expense.

Mr. *James Riddall Wood,* called in; and Examined.

Mr. *J. R. Wood.*

2130. *Chairman.*] YOU have been employed by the Statistical Society of Manchester for several years past in the investigation of several populous districts in Lancashire, have you not?—I have, and also in other counties besides.

2131. You were occupied for some time in an inquiry into the state of the education of the humbler classes in Liverpool, were you not?—I was, and the state of education generally.

2132. And also in Manchester?—Yes.

2133. And also at Salford?—Yes, and at Bury and at York.

2134. You have had an opportunity in those several districts of seeing what the state of the dwellings and habitations of the working classes is, have you not?—I have.

2135. With respect to Liverpool, what is the condition of the habitations of the working classes in the poorer parts of Liverpool with regard to drainage, cleansing, and ventilation?—The evidence I have to give with respect to Liverpool will refer to the latter end of 1835, and the commencement of 1836.

2136. Whilst you were conducting that inquiry, did you make a note of the number of inhabited courts and cellars occupied in that borough?—I did.

2137. Do you recollect that the summary of the number of courts in the borough of Liverpool was 2,271?—I recollect that it was about that number.

2138. And that the number of cellars inhabited was 7,493?—Yes.

2139. At that time the estimated population of the borough was 230,000?—It was.

2140. It is stated in that Report, that the number of courts inhabited by two families at least, and of which the far greater proportion have only one outlet to the street, is 1,964?—Yes, that is the fact.

2141. In consequence of their not having more than one outlet, were they close, so that very little air could pass through them?—Very much so.

2142. Was that a state of things injurious to the health of the inhabitants?—Yes. I drew up a report of the physical and moral condition of Liverpool; presented it to the Statistical Society at Manchester; it was communicated in manuscript, but not printed.

2143. In consequence of this, your attention was particularly turned to the subject?—Yes. Several of the courts have 16 houses; some have double that number; and in one with 16 houses, 40 families were resident.

2144. Was that a court with only one outlet?—No, there are two outlets; but the entrance was exceedingly narrow, and with a number of families residing in them, the houses were very lofty and very close.

2145. The statement made as to these cellars is, that they are occupied as permanent dwellings, their inhabitants sleeping in them at night, as well as living by day; is that an accurate account?—It is quite correct.

2146. Was the state of the working classes who inhabited those very poor and miserable, in your opinion?—Yes, from what I saw; and I visited the cellars, and took the dimensions of them in almost every street.

2147. Were they very confined?—Yes, the average dimensions were about 12 feet by 10, of those lying on the north shore, to the north of Dale-street.

2148. Did

2148. Did they want ventilation?—Extremely so; there was no thorough draught; there was scarcely a cellar in that district which had anything like a thorough draught; I had some difficulty in getting down without dirtying my top-coat.

2149. Was the state of the houses injurious to health?—Yes; Mr. Dixon, at the Town-office, urged upon me the necessity of discontinuing my visits on account of the fever which prevailed. To give an idea of the extent of it, the expense for that year of boards for coffins (the coffins being made on the premises by the paupers,) was 441 *l.* 9 *s.* 4 *d.*, merely for boards for one year, and that was not one of the cholera years.

2150. Mr. *Tufnell.*] Does fever prevail more among those who reside in the cellars than those who live in the upper stories?—Decidedly so; I was about 11 months going through the whole of the town; I took great pains in visiting the habitations.

2151. Generally speaking, there was a family in the cellar, and another in the upper story?—Yes.

2152. Did the fever prevail more in the cellars than in the other rooms of the house?—Certainly; the district in which the fever principally prevailed was that in which the cellars abound; but supposing the inhabitants of the cellars to have the fever, it would frequently extend itself to the upper stories of the house.

2153. *Chairman.*] Do you recollect that in those cellars in which the fever prevailed at the time to which you refer, there were no less than 31,000 persons living?—Between 31,000 and 32,000 persons was the calculation I made; giving five to a cellar.

2154. Forming two-thirds of the whole working population?—Yes.

2155. Mr. *Tufnell.*] What was the rent paid for a cellar?—The rent paid was from about 1*s.* 6*d.* or 2*s.* to 3*s.* 9*d.*; the 3*s.* 9*d.* will be two-room cellars; but the general rent I do not suppose exceeds 2*s.* a week.

2156. *Chairman.*] Do you recollect subsequently some doubt being cast upon the accuracy of this account?—Yes, most distinctly.

2157. Did another inquiry take place under the sanction of the head constable of Liverpool?—Yes.

2158. Did it appear, then, upon a closer inspection, that the number was not 7,493, but 7,862, showing a greater number than you had before stated?—Yes; and I was asked to account for that, and I found that we went on a different principle; they counted all the dwellings used as cellars, though they might be at the time of the inquiry not in occupation. I did not reckon those; I merely counted those in actual occupation at the time.

2159. The subsequent inquiry showed that yours was not overstated?—Yes.

2160. With respect to houses built back to back, without ventilation, are there many of those in Liverpool?—There are many, and they are very much increasing. It is a very profitable description of property.

2161. There can be no possible ventilation through the rooms, in consequence of their construction?—Just so.

2162. Is not that construction very injurious to the health of the inhabitants?—It must be so.

2163. Is that increasing?—They were increasing very much at that time.

2164. With respect to the cleansing and drainage in the poorer parts of Liverpool, where the working population live, what is the state of the drains; are there covered drains coming up into those lanes and alleys, or only surface drainage?—Chiefly surface drainage, especially in that portion of the town to which I have been alluding, and where the cellar habitations prevailed; in consequence of that, the smell in the cellars is most offensive, and many persons have stated that they are obliged in the night to quit their cellars, on account of the offensive gas that comes into them.

2165. With open drains, what is the state of cleansing of those small courts and narrow alleys; is the refuse left stagnating, or is it cleared away?—It is left there for a considerable time; and during the fall of the year, it was so offensive, I was generally obliged to carry my handkerchief to my nose as I passed along; I have noticed decayed vegetables, the offal of fish, and other vegetable and animal substances, polluting the atmosphere: it appeared a wonder that there was not even greater sickness than I found. In some of the small streets it was so bad, it was difficult to get along at all.

Mr. *J. R. Wood.*

6 April 1840.

2166. Filth and dirt remained accumulated there from time to time, without being removed?—Yes, that was the case.

2167. Did the children in those densely-crowded districts appear to suffer in their decency, cleanliness, and health?—Remarkably so; so much so, that I frequently made notes of that circumstance, the squalid appearance of the children in the schools, and also the absence of a great number of children frequently from the schools, owing to the prevalence of the scarlet fever, (several had been taken with it,) and the prevalence also of measles and hooping-cough.

2168. Mr. *Tufnell.*] Do you consider those originated or aggravated by the state of the atmosphere?—Decidedly so; and the close state of the rooms in which those schools were kept.

2169. *Chairman.*] Are there any building regulations in Liverpool, to prevent the houses being constructed in a way injurious to the health of the inhabitants?—I have inquired, and there are no such regulations.

2170. Would such regulations, in your opinion, be very favourable to the health of the working classes?—Decidedly so.

2171. With respect to the privies, and other conveniences belonging to those houses, were they in a neglected state?—In a most disgusting state, in many places; and what I conceive is very injurious in more ways than one, there was perhaps only one to a great number of habitations.

2172. Was the degree of stench from them exceedingly bad?—Very much so, especially in warm weather.

2173. Was there any system of inspection or cleansing of those districts?—No, there appeared nothing of that sort; I suspect they were never cleaned, till they were forced by necessity to attend to it.

2174. Would not some system of inspection in districts of this nature, where the humbler classes live, be extremely advantageous to them in point of health and comfort?—I will read a remark I made to the Committee upon that subject: "If all buildings, both in streets and courts, were subjected to appointed inspectors, who should see that proper arrangements were made for ventilation, and the carrying off foul water, &c. the public, I conceive, would derive immense permanent benefit, although such an interference might be considered by landlords as an invasion of the rights of private property."

2175. Some regulations, in your opinion, appear absolutely necessary with respect to that district?—Decidedly.

2176. Mr. *Tufnell.*] In the better parts of Liverpool is there a good system of sewerage?—Within the last three years a great improvement has taken place in Liverpool; but I suspect that has been confined more to the great leading thoroughfares and principal streets.

2177. It has not extended to the dwellings of the humbler classes?—Not to the same extent. I have generally taken a turn round, when I have been in Liverpool, to see whether there was a difference, and I think there is an improvement in some of the streets I have mentioned in my report, to which attention appears to have been directed; still they are in a very bad state.

2178. *Chairman.*] Has there been any alteration in the construction of the houses?—No.

2179. There are a great many courts in Liverpool with only one outlet?—Yes. I have a plan which will show that, which I will lay before the Committee. It is astonishing to see the immense number of courts with only one outlet.

2180. Mr. *Tufnell.*] When a cellar lets for 2*s.* a week, is the rent of the rooms above higher?—The rent of the first floor and the ground floor is higher than the cellar.

2181. Do the parties take those cellars for cheapness, or for warmth?—I think for cheapness; and there is another reason why they wish to have a cellar, particularly in Liverpool: in a cellar they have an opportunity of exposing to the street vegetables and herrings, and so on; they carry on little retail trades, which are exceedingly injurious to the health of the inhabitants. I have gone down into cellars frequently, to take the dimensions of them, and to converse with the people, and many have complained that their health was suffering, but they said, What were they to do.

2182. *Chairman.*] The Committee understand that you went to inquire into the state of the education of children, and that you found it exceedingly deficient,

deficient, and that the instruction they had was, a great deal of it, very indifferent?—Just so.

2183. In page 10 of your report, it is stated, "That the condition of most of the schools in an extensive and populous district, stretching upwards from the north shore to the Scotland Road, is wretched in the extreme, corresponding, in a remarkable manner, with that of the population." Is that correct?—It is.

2184. It is stated in the note that you were obliged to inspect every street in the town, and that in doing so, you took an opportunity of collecting much valuable information with respect to the general condition of the streets and houses, and of the persons inhabiting them?—That was the fact.

2185. It is stated, "With few exceptions, the dame schools are dark and confined; many are damp and dirty; more than one-half of them are used as dwelling, dormitory, and school-room, accommodating in many cases a family of seven or eight persons; above 40 of them are cellars." Is that an accurate account?—It is.

2186. That must be very injurious to the health of the children?—Certainly.

2187. In another part it is said, "Of the common day-schools in the poorer districts, it is difficult to convey an adequate idea, so close and offensive is the atmosphere in many of them, as to be intolerable to a person entering from the open air, more especially as the hour for quitting school approaches. The dimensions rarely exceed those of the dame schools, while frequently the number of scholars is more than double. Bad as this is, it is much aggravated by filth and offensive odour arising from other causes." Is that an accurate account?—It is quite correct.

2188. Can such a state of things exist without very much injuring the health of the children of the working classes?—Certainly not.

2189. Do you recollect pointing out this to the mistress of a dame school, and her replying, they thrive best in dirt?—Yes.

2190. Mr. *Tufnell.*] What do they teach in the dame schools?—Reading, sewing, and knitting.

2191. *Chairman.*] Was it the fact that the masters were generally ignorant of the depressing and unhealthy effects of the atmosphere which surrounded them, and that they did not consider it desirable that their schools should be better ventilated?—Yes; I was very much surprised to find that the case; few masters had sufficient intelligence to see that; and I was frequently obliged to request them to open the window, or to allow it to be opened, and to stand near it, the atmosphere was so close and offensive.

2192. Your report states, "A circumstance which proves the unwholesome condition of many of these schools is, the very rapid spread of infections or epidemic disorders, which occasionally make their appearance in them. The measles, scarlet fever, smallpox, and opthalmic affections never attack one scholar alone; frequently one-half of the scholars are affected at the same time; and some of the schools have been visited at times when two-thirds of the children usually attending were detained at home by such complaints"?—Yes, I remember an instance in Liverpool of scarlet fever in a school; the mistress told me that above one-half had, within the last 10 days, been taken with scarlet fever, and that then one child was lying ill with scarlet fever. A similar instance occurred in Manchester of measles; it proceeded to a much greater extent; a child was ill in a crib, in the very room in which the school was held, and the mistress was in fact ill in bed at the same time.

2193. Mr. *Tufnell.*] You are aware, no doubt, that in schools, even of a superior class, unless the children are dispersed, it runs through the school?—Yes, but it appears to me that it acquires greater virulence in the cases of those schools.

2194. *Chairman.*] The report states, "These cases have invariably occurred in the most unhealthy and ill-ventilated schools, while in schools more favourably circumstanced, it has rarely happened that more than three or four of the scholars have been absent on account of illness at the same time"?—That was the fact; the number of schools in which cases of that kind occurred were confined chiefly to those districts.

2195. Do you remember in those populous districts a school in a garret up

Mr. *J. R. Wood.*

6 April 1840.

three pair of dark broken stairs, with 40 children in the compass of 10 feet by 9?—Yes, I remember that.

2196. "On a perch forming a triangle with the corner of the room sat a cock and two hens, under a stump-bed immediately beneath was a dog-kennel, in the occupation of three black terriers, whose barking, added to the noise of the children and the cackling of the fowls, on the approach of a stranger, was almost deafening. There was only one small window, at which sat the master, obstructing three-fourths of the light it was capable of admitting"?—I recollect those circumstances perfectly.

2197. Those are schools to which a very large number of children in Liverpool constantly resort?—Yes.

2198. Mr. *Tufnell.*] What is the sum paid at those schools?—From 2*d.* a week to 6*d.* in the dame schools; with the exception of some for the middling classes, they do not get 6*d.*

2199. Are you aware whether in any towns there is a regulation for sending the pauper children to a school at a distance from the town?—There is.

2200. Are you of opinion that such a regulation might be beneficially introduced into Liverpool?—I am fully convinced of the value of such a regulation, but I conceive it would meet with some strong objections from certain quarters; but undoubtedly I think it might be carried into effect with very great benefit to the town.

2201. *Chairman.*] In page 18 you state that, after having remarked the nature of those schools, "the sufficiency of light and of space and proper ventilation are essential in every school, but few of the masters or mistresses can afford them; and the difficulties they have to contend with in consequence of these defects have a tendency to distract their attention, to exhaust their energies, and depress their spirits to an extent of which they themselves are not at all aware." Is that an accurate observation, in your opinion?—It is perfectly true; the very small sum they charge is not a sufficient remuneration for them; they cannot subsist upon it.

2202. Those were not schools for the children of the paupers, but schools to which the children of the working classes went?—Yes.

2203. In page 40, after stating the many thousands who have thus neglected education, you state, "there are not less than 30,000 children, between the ages of five and 15, receiving no education, either really or nominally." Is that accurate?—It requires qualification; it is rather ambiguous as it is put here; I wished it to be altered at the time. This is only a report which stated how matters were at the time the inquiry was made; but we cannot infer from this that there are 30,000 children in Liverpool who are never receiving, and never have received, any education at all; but this is the inference that a superficial reader would derive from this report, which ought to be somewhat qualified: at the time this inquiry was made there were 30,000 children who did not appear to be attending any school.

2204. Mr. *Tufnell.*] Are there any burial-grounds in the town?—Of course there are several burial-grounds in the central part of the town, but they are not so much resorted to now as the large burial-grounds are; they are more within the outskirts.

2205. Do you know whether they affect the atmosphere of those poorer districts?—No. I think there is one circumstance which very much affects the atmosphere in those districts in which the cellars are particularly: there is a great deal of broken ground, in which there are pits; the water accumulates in those pits, and of course at the fall of the year there is a good deal of water in them, in which there have been thrown dead dogs and cats, and a great many offensive articles. This water is nevertheless used for culinary purposes. I could not believe this at first. I thought it was only used for washing, but I found that it was used by the poorer inhabitants for culinary purposes.

2206. Was that owing to the want of a supply of water?—Yes. There is a good supply of water for the poor, if they had the means of preserving it. The water is turned on a certain number of hours during the day, four hours, perhaps; the poor go to the tap for it; it is constantly running, and each poor person fetches as much as they have pans to receive; but they are not well supplied with these articles, and in consequence of that they are frequently out of water. It is not sufficient for washing, or anything of that kind.

2207. *Chairman.*] Under the circumstances, it is not an adequate supply?—It is not.

2208. The consequence is, they resort to this stagnant water as a substitute?—They do.

2209. Have you had an opportunity of investigating the state of the poorer population of Manchester?—I have.

2210. Do you know the sort of dwellings they reside in, as far as regards the form of their residences, and their cellars, and so on?—I had the same opportunities as at Liverpool; but during the time of prosecuting the Manchester inquiry I was in delicate health, and therefore did not go so minutely into it. I visited the cellars, but I did not count the number. My impression is, that they are not nearly so numerous in Manchester as in Liverpool; bad as they are, they are of a superior description, as far as light and ventilation go.

2211. Though, generally speaking, they are in a better condition than those at Liverpool, are there still a great many of those damp and unwholesome cellars in which the poor reside in Manchester?—Yes.

2212. Are there many courts in Manchester?—Not so many as in Liverpool; but there are a great many very narrow streets, cottage property, and with double cottages; consequently, there can be no thorough draft; and this species of property, I conceive, with the simple exception of having an outlet at each end, is quite as injurious to health as the court property.

2213. They are the habitations in which a great proportion of the working classes reside?—Yes.

2214. Are they still going on building in the same form and way?—They are; it is a profitable species of property, very lucrative.

2215. The owners get what rent they can out of the people who live in them, and do not care very much, probably, about the health of the inhabitants?—That is the case.

2216. With regard to cleansing and sewerage, what is the state of that in Manchester?—Decidedly bad; to say worse than Liverpool, would perhaps be going too far, but quite as bad.

2217. Injurious to the health of the inhabitants, in your opinion?—Yes; I had an opportunity of observing that. During the whole time the cholera prevailed I was in the habit of visiting different neighbourhoods, for the purpose of ascertaining their physical condition, and I could predicate pretty well before hand where it would prevail to the greatest extent: Buxton-street, and Pump-street, and all those neighbourhoods. I frequently said if we had the cholera, it would prevail in those districts, and I strongly recommended that some measure should be taken for the cleansing of those streets and the habitations, and I applied at the town offices for that purpose, but I did not succeed in getting anything done. There was a town meeting in the township in which I reside, for the purpose of erecting a cholera hospital, which I attended; that was the only town meeting I did attend. I objected to the proposed plan, and stated that the money would be much better expended in cleansing the streets and the habitations of the working classes, and recommending to them strongly cleanliness as the best means of preventing its spreading in the town.

2218. Did you find great portions of those districts grossly neglected?—Very much so.

2219. Was that neglect of cleansing and drainage, and so on, the great cause of ill health to the working classes there?—The principal cause.

2220. Was filth, piled up in the way you describe in Liverpool, left in a way to taint the air, and be injurious to the health of the inhabitants?—Very much in the same way; one disadvantage Manchester labours under is, that it is on a much lower surface, and the water is more stagnant in consequence; and when I represented the matter at the town offices, I was told that those streets to which I directed attention were not on the town books; that they were private property, and the town could not interfere with them.

2221. They were, however, greatly neglected?—They were.

2222. Did the inhabitants appear to suffer in their health in consequence?—Yes; at two or three periods, I knew of fever having spread remarkably in those districts.

2223. Was the appearance of the children dirty and squalid and depressed, in consequence of those close and neglected dwellings, in your opinion?—In my opinion, it was; of course there were exceptions; sometimes we saw, in the midst of the filth, children as healthy and well as one would wish to see children, but there were many in a state of the greatest wretchedness; whether that

Mr. *J. R. Wood.*

6 April 1840.

should be all attributed to the state of the atmosphere, or part to the poverty of the parents, of course I cannot say, but such was the fact.

2224. Do you think, having attended very much to school tuition, and accustomed to see the progress of children, that their living in those dirty, filthy dwellings, with the miserable inconveniences you have referred to, would have an effect in lowering the moral tone of the children, doing away with a great deal of the advantage they would otherwise receive at those schools?—I have expressed it very much in that language in my report; that is my decided opinion.

2225. So that as long as these things are neglected, and this filth remains about, it lessens very much the advantage which would be received from good tuition in the schools?—Very much so; it has not only an injurious effect physically but morally.

2226. Do you recollect having reported with respect to schools to which a very numerous body of scholars in Manchester went, for instance, the dame-schools, "This is the most numerous class of schools, and they are generally in the most deplorable condition"?—That is quite accurate.

2227. Also, you go on to say, "These schools are generally found in very dirty, unwholesome rooms; frequently in close damp cellars, or old dilapidated garrets; in one of these schools 11 children were found in a small room in which one of the children of the mistress was lying in bed ill of the measles"?—I recollect that circumstance well.

2228. "Another child had died in the same room of the same complaint a few days before, and no less than 30 of the usual scholars were then confined at home with the same disease"?—Yes; the woman represented herself as having 40 scholars in ordinary times.

2229. Did these observations apply to a large class of schools, to which a great number of the children of the working classes came?—They did, to the majority.

2230. Would not such a state of things be highly injurious to the health of the children?—Certainly, very injurious; and that point I represented frequently to the Committee.

2231. With respect to any play-grounds being appendant to the schools of the latter class, either in Manchester or Liverpool, were there any play-grounds where they could get the change necessary for young persons?—No, I do not recollect a single instance of a private school for the working classes having a play-ground. I think I can venture to say that neither in Manchester nor Liverpool was there a common day or dame-school, or any school of that class, where there was a play-ground, or anything which could be considered of that character, and the public schools are very deficient in that respect.

2232. With respect to Salford and Bury, how far do the observations you have made, with reference to the buildings, and the want of drainage, and so on, apply to the dwellings of the working classes in these towns also?—I think they were very much the same in both those places.

2233. Those are both towns which have rapidly increased in population and in wealth lately?—They are.

2233*. In those, as well as in other large towns you have spoken of, the situation of the labouring classes appears to have been greatly neglected?—Very much so.

2234. You are aware that there is no law at present to prevent the construction of houses in any form persons choose, and no means of preventing their being constructed so as to be very injurious to health?—It was on that principle that I urged upon the Committee the importance of something being done in the way of inspection.

2235. Do you not think that sanitary provisions would be highly desirable to the health of the lower classes?—I think them highly necessary.

2236. Do you think regulations to enforce cleansing and ventilation are highly desirable to the health of the inhabitants?—I think them highly desirable.

2237. Are you aware there is a great deal of ill health and a great deal of expense thrown upon the richer class in consequence of the neglect of those precautions which might be taken?—I am aware that there is a great expense thrown upon the richer classes, and I have no doubt that the health of many is seriously affected.

2238. Have you any doubt that the state of the poorer classes in those towns in these respects is the cause of a great deal of discontent?—I would not undertake

dertake to say that that is the cause; but I am quite sure, from the conversations I had with them from house to house, that it aggravates any feeling that they have, however unjustly, conceived, that there is no sympathy with them, and that there is nothing done to increase their comforts; and this frequently they have remarked to me when I spoke about the state of the drains; even so late as last year, in Hull, when I made some inquiries from house to house, they frequently made remarks to that effect; that the habitations of the poor and the comforts of the poor were altogether neglected; that the parties who were commissioners, or who had the power of making alterations and drains, and improving the streets, and so on, had taken care of their own property and their own dwellings, and left the streets in which they resided almost entirely without such conveniences.

2239. You think that is the prevailing opinion among them?—Yes, I think much more than there is ground for; but that it is a very prevalent opinion.

2240. Are you able to speak to the state of Ashton, Staleybridge, and Duckinfield?—Yes.

2241. With relation to all these towns, the population of which is very large, without going to the minutiæ, do the same general observations apply to the construction of the dwellings, and the want of ventilation, cleansing, and so on?—Yes, but with this difference, that in Staleybridge and Duckinfield, and also in Ashton and Bury, there are much fewer cellar habitations, and the number of houses in which the rooms are set off to separate tenants is much smaller than in Manchester and Liverpool, and that I conceive owing very much to old large houses having got perhaps in the hands of an owner who does not choose to go to expense, or being in some neighbourhood which has become a low neighbourhood, and he finds he can make more of his old house by letting it off in that way than taking it down and rebuilding it; that is done to a very great extent indeed; and in Liverpool, to my knowledge, there are many instances in which that has been done; one of these old houses, in which there were five families, was blown down, or fell down, in the night, and there were three or four lives lost, and one person was taken to the infirmary; and a few nights afterwards another house fell down, aad another life was lost.

2242. With reference to the construction of houses in the towns mentioned, Salford, Bury, Ashton, Staleybridge, and Duckinfield, the want of ventilation and cleansing, in the case of the alleys and narrow lanes where the poorer classes dwell, do the same general observations apply?—They do.

2243. The same neglect of decency and comfort and cleanliness which you have observed in the other districts?—Very similar.

2244. Doubtless producing the same general effect upon their health, and their comfort, and so on?—Yes, I should consider that it had the same effect.

2245. Does the use of ardent spirits prevail greatly among the poorer classes in those districts you have referred to?—It does.

2246. Have you any doubt that in many instances where you found all kinds of dirt and filth, and those evils prevail, they resort to the dram for a short refuge?—Yes; I think it is quite natural that men educated as they have been should do so.

2247. Do you not think that if their dwellings could be made more comfortable, and the decencies and cleansing of those places attended to better, that would have the effect of improving their dispositions, and increasing their desire to be at home?—Anything which tends to elevate their physical condition, and to improve their domestic comfort, must have a good effect upon them.

2248. It would improve the character of their children if they were more comfortable at home, would it not?—I conceive it would have that effect.

2249. Have you found any cases of other disorders which appeared to be made worse by the situation in which those people were?—The smallpox, measles, scarlet fever, hooping-cough, I saw some very remarkable instances of that where they had spread very considerably, aggravated very much by those causes.

2250. Has your observation been attracted, during the time you have been in Liverpool and Manchester, to the state of the sewers and drainage, open pits and stagnant water, immediately round the populous districts referred to?—It has, and I have represented the matter frequently in different quarters.

2251. Are there drains and stagnant places left open in the populous districts immediately round Manchester and Liverpool?—There are, I have represented this to the authorities, but I was told that they were not upon the town books, and that they therefore could not meddle with them.

Mr. *J. R. Wood.*
6 April 1840.

2252. Were those open pits and stagnant pools and filthy spots very numerous?—Yes.

2253. Do you apply that answer to both Manchester and Liverpool?—Yes. With regard to Manchester, I know cases where, in the very front of the houses, there is constantly stagnant water at the fall of the year. I can almost be certain there will be cases of fever in those houses; and from inquiries that I made, there never comes a year but during the months of October and November and December there is fever prevails to a greater or less extent, according to the state of the atmosphere.

2254. Is this a populous district, inhabited chiefly by the working classes?—Yes.

2255. Does the same thing apply to other parts round Manchester?—Yes.

2256. And also to places in the neighbourhood of Liverpool?—Yes, remarkably so.

2257. Have fevers and other complaints been generated, in your opinion, very much by the want of sanitary provisions?—Yes, there is no doubt of that.

Mercurii, 8° die Aprilis, 1840.

MEMBERS PRESENT.

Mr. Brotherton.	Lord J. Stuart.
Mr. Cowper.	Mr. Tufnell.
Mr. Greene.	Mr. Vigors.
Mr. R. A. Slaney.	Mr. Walker.

R. A. SLANEY, Esq. IN THE CHAIR.

Mr. *James Riddall Wood,* called in; and further Examined.

Mr. *J. R. Wood.*
8 April 1840.

2258. *Chairman.*] YOU were employed by the Statistical Society of Birmingham, for the purpose of making inquiry into the state of education in that town, were you not?—I was.

2259. In what year?—Early in the year 1838.

2260. How long were you occupied in that inquiry?—About two months.

2261. During that time did you make strict inquiry into the state of the schools, and the state of the humbler classes in Birmingham?—As strict as I could, consistently with the time I had to devote to it.

2262–3. Had you an opportunity, during your residence in Birmingham, of frequently visiting the abodes of the humbler classes in various parts of the town?—I had.

2264. Do you recollect the population of Birmingham?—In 1830 the population was 146,986.

2265. Has it been increasing in population most rapidly since that time?—Very rapidly.

2266. Buildings have been extending themselves on all sides?—Yes.

2267. Had you an opportunity of seeing at that time what was the state of the dwellings of the humbler classes at Birmingham?—Yes.

2268. The state of their dwellings is supposed to be a great deal better than that of the poorer classes at Manchester and many Lancashire towns?—Very much better. In the first place, I rarely met with any dwellings at Birmingham in which more than one family resided; each family had a separate dwelling, and they were not let off in flats as they are in Manchester and Liverpool to a very great extent.

2269. The drainage is better, and the general aspect and comfort of the humbler classes appears to be better regarded than it is in the populous Lancashire towns?—Generally speaking, the streets and the drainage in Birmingham are very superior to those in Manchester and other towns in Lancashire.

2270. Will you point out any districts in which that was not the case?—With respect to the construction of the houses that are being built at the present time, or were at the time I was there, I observed particularly that there were a great number of them double houses, as I should call them, and without a thorough air.

2271. Rows of houses built back to back?—Yes.

2272. Those were intended for the dwellings of the working classes?—Yes.

2273. There could not, in consequence of that, be that ventilation which was necessary for the preservation of health?—No.

2274. In what district was that?—In the Borderley district, lying out towards Gill Heath, and the streets running into Summer-lane and New Town-row, I observed many dwellings of that description.

2275. Those were new houses?—Yes, chiefly modern-built houses.

2276. Was there the same thing going on in any other district?—I do not recollect buildings to any extent to which that applied, except in that district.

2277. With respect to their being built in alleys or courts without thoroughfares for air, was that the case in many parts?—That was not much the case.

2278. Is that the case generally in the old town?—Yes, in general; as compared with other places, it is much superior.

2279. As respects the drainage and sewerage, how is that?—I made frequent inquiries of the inhabitants of the courts, and found much fewer complaints; that may be partly owing to its situation; it is all on inclined planes; probably the drainage may not be in a much more perfect state than in Manchester; but Manchester lies on a dead level, or nearly so; of course the situation of Birmingham is better.

2280. Do you know whether there is underground, or only surface drainage?—I know there was underground drainage in all the leading streets of the town, and there were soughs, as they are called, lying along the sides of the streets, covered over.

2281. Was there any portion of the suburbs in which there were open sewers where there appeared to be neglect in those respects?—In Borderley and Deritend particularly.

2282. Are those populous districts inhabited by the working classes?—Yes; there appeared to me to be very great neglect in not covering over some very offensive ditches running immediately before the houses.

2283. There were open sewers?—Quite open, and lying immediately in front of the houses.

2284. Would the smell and stench from those in warm weather be very obnoxious?—Certainly.

2285. Did you hear of any fevers in consequence?—I heard a very terrible account of Birmingham in that respect from Dr. Corrie; I stated that if fever prevailed anywhere, it would probably be there; and he said the principal portion of fever cases he had was in that district.

2286. He is a physician, practising in Birmingham?—Yes, he is a physician, and one of the Statistical Society.

2287–8. Did you take notice whether there was attention paid to the privies or cesspools, or whether they were in a neglected state?—My impression was favourable in respect of Birmingham, as compared with other places.

2289. Is the supply of water good in Birmingham?—I think it is very good.

2290. Are there any open places in the immediate vicinity of the town reserved, so that the humbler classes may be enabled to take exercise at periods when they have an opportunity?—I know of no places reserved for that purpose; but there are many places where the working classes have an opportunity of walking at present.

2291. Are they open commons?—No, open roads.

2292. Are there any grounds reserved other than the thoroughfares?—No.

2293. The buildings there, of course, continue extending and enlarging the surface of the town?—Very much so.

2294. Had you an opportunity of investigating the state of the children of the poorer classes of an age to attend schools?—I had.

2295. Can you give the number who do not attend any schools?—I can give the number not attending at the time the inquiry was prosecuted; I have the number; between 5 and 15, there were 23,176 who were not receiving either Sunday-school or day-school instruction at the time the inquiry was prosecuted; but I ought to state that at that period the poor were suffering very much in consequence of the depressed state of trade, and I found schools which had had 20 or 30, with only four or five scholars at that time. I made an inquiry in each school as to the diminution which had taken within the last four months; the total reduction they made to appear was 1,482; but in addition to that, there were some schools that were given up entirely, and those I could not estimate, and therefore they were not introduced into my account.

2296. With reference to the state of the dame schools in Birmingham, that was better than in Liverpool and Manchester, was not it?—Taken as a whole, it was much better.

Mr. *J. R. Wood.*

8 April 1840.

2297. Still it was, in your opinion, very defective?—Exceedingly defective.

2298. What was the number of children attending those schools?—There were 267 dame-schools and 3,900 scholars.

2299. What were the ages of those children?—1,026 were under five years of age.

2300. What sort of dwellings and school-rooms were those in which the great body of those children attended?—The general feature of those schools was that they were in confined situations; small rooms, but generally on the ground floor, and not, as in Liverpool and Manchester, frequently in cellars or garrets. I met with an occasional school in a garret, but they were very rare.

2301. Were they close?—They were very close, and that was in the depth of winter. I should imagine it would be much more unpleasant to visit them in the heat of summer.

2302. Were they well ventilated?—No, extremely ill ventilated.

2303. Was the state of them generally such as you would think would be injurious to the health of young children constantly attending them?—I should conceive it would be so in many schools in a very great degree.

2304. With respect to the common day-schools, what number of children were attending them?—At the common day-schools, where reading, writing, and arithmetic were taught, 4,280.

2305. What was the state of the day-schools; were they airy and well ventilated, and well kept, or was the reverse their character?—In a small proportion of them I found they were held in places in which Sunday-schools were held; consequently they were more commodious, the places having been built for Sunday-schools; but the generality of them were in rooms far too small for the number of children generally found in attendance on such schools. The number is generally larger in the common day-schools than in the dame-schools.

2306. Were they in general close and ill ventilated?—In general I should say they were close and ill ventilated.

2307. Is the confinement in such close and ill-ventilated apartments, in a general way, injurious to the health of the children?—Decidedly so.

2308. In that large town were there any play-grounds appendant to the dame or day-schools?—None whatever.

2309. The children had no place in which they might take exercise in the intervals between their lessons without being turned out into the street?—No; in fact it was not the custom to allow an interval either during the morning or the afternoon; it was one point with me always to recommend an interval for about a quarter of an hour, but I found very few instances where it was done.

2310. How long were those children kept in those close rooms on an average?—From nine to half-past 12; those in the dame-schools till 12, and in the afternoon, three hours again; in the dame-schools it was two hours and a half.

2311. Without any interval for amusement or exercise?—Yes.

2312. Did the children in those schools appear tired and dull?—I frequently remarked, after 11 o'clock, that as I entered the school there was a languor both about the masters and the scholars, and it was very difficult for the masters to get them to go on with the ordinary school business quietly; they seemed to be restless; I pointed this out to several intelligent masters, and they admitted that it was true; that they felt a disinclination to struggle with the children after a certain period; and I explained to them, that in coming into the school I felt such an oppression of the chest, it was some time before my lungs were accommodated to the atmosphere of the room from the closeness of it.

2313. Have you any doubt that such a close atmosphere must have been injurious to the health of the children?—I know it is injurious; I have seen many instances of it.

2314. Mr. *Greene.*] You stated that you found a difference between Birmingham and Manchester; that in Birmingham the inhabitants were principally living in separate houses, and in Liverpool and Manchester they were living several families in one house; was there anything connected with the nature of the population, or the habits of the people, which led you to account for that difference?—I account for the absence of such a mode of living in Birmingham from the circumstance of their having very few Irish among them.

2315. *Chairman.*] Is not the trade in the town of Birmingham of a different character also?—Yes.

2316. Do not many of the workpeople carry on their trades in their own houses?—Yes.

2317. That is not the case at Manchester?—No.

2318. So that they earn their bread, as well as live in their houses, in many instances?—Yes.

2319. Is it the case that in Manchester a very considerable number of the working classes live in houses which they have to themselves, or do a considerable proportion of them live in houses having separate flats?—Of course the majority reside in separate houses; but at the same time there is a very large number, in the densely-populated districts in the neighbourhood of Ashley-street, Silver-lane, and Buxton-street, residing in houses with separate rooms, in the same house.

2320. *Chairman.*] Have you had an opportunity of seeing the state of the town of Hull?—I have.

2321. Were you engaged in an investigation into the state of education in that district?—Not particularly into the state of education; but an investigation into the physical and moral condition of the inhabitants of the town.

2322. What is the state of the habitations of the working classes at Hull; is it not much better than in many of the Lancashire towns?—Yes, the general condition was much better than in most of the Lancashire towns.

2323. What is the population of Hull?—In round numbers, 38,000; that is the borough of Hull; the whole population is, I think, rather better than 60,000.

2324. It is the fourth port in the kingdom, is it not?—It is. In what is called the North Myton district a very large portion of the poorer population reside; and some of the streets, a considerable number of them, are not in a much better condition than those of Liverpool; not quite so bad; and there are no cellar habitations; but there are courts, and courts of a very peculiar construction, a court within a court, and then another court within that.

2325. There are no thoroughfares?—Merely a covered entrance; and filth or dirty water is thrown out; there is a gutter in the middle of the court, communicating with the street; and thus it runs down to the common drains; the leading streets are sewered.

2326. Those courts are not sewered?—No.

2327. Are there no covered drains?—No.

2328. The wet and other matters remain on the surface?—Yes.

2329. Is this unfavourable to the health of the inhabitants?—Yes.

2330. Were those courts within courts inhabited by the poorer classes?—Yes.

2331. Are there any thoroughfares?—There is a thoroughfare through most of them; in some there is no thoroughfare.

2332. Is there any means by which the air can pass through?—There is no means by which the air can circulate in those districts; it is very oppressive to breathe, particularly in the afternoon and in warm weather. I would mention what is called the North Ward and St. Mary's Ward, and also the other two central wards, and the Humber Ward; in all those there are districts very similar to those I have been describing, abounding with courts, which are close to the river; in fact, within the island formed by the Humber, the Hull, and the docks.

2333. Is that a very low, damp district?—Yes.

2334. A district therefore in which air and wind would be particularly necessary?—Very much so.

2335. On the contrary, there is none?—No; the houses are very lofty, three stories high, generally speaking, in that district; and in most of the courts I could almost reach across; they are very narrow from front to front, not more than from 7 to 12 feet wide on the average.

2336. No attention appears to have been paid to the health of the inhabitants?—None whatever; they have been originally houses occupied by a superior class, but in process of time they have been converted into tenements; each house is let off separately, on the principle that they are frequently in Manchester and Liverpool; I found, I think, on the average, in some of the courts, 12 and 14 families resident.

2337. Was there much fever and illness in those districts?—There was to a great extent in that district, at the time I visited it, a considerable degree of fever, but it was at a season of the year when fever does prevail; it was not nearly so severe as I have seen it in Liverpool and Manchester.

2338. You are now referring to the old parts of Hull?—Yes.

2339. With reference to the new parts of Hull, are the houses built back to back?—There are very few; in some instances they are now in progress, in point of fact, or were half a year ago, and it seems to me to be a novel description of buildings.

Mr. J. R. Wood.

8 April 1840.

2340. This bad system of building the houses back to back appears to have travelled across the island, and is now making progress in Hull?—It appeared to me to be so.

2341. You know the evils which arise in Liverpool from that construction?—Yes, and Manchester too.

2342. Wherever that occurs it must always be unfavourable to the health of the inhabitants?—Yes, and I have been in the habit of seeing it for 15 years.

2343. Are they in the habit of building the courts in Hull so narrow as in other places?—Not to the same extent; there seems to be plenty of ground; ground is not so valuable at present, consequently the tenants have a great deal more comfort in the houses than they have in other large places I have visited.

2344. Is there any other part of Hull in which attention does not appear to be paid to drainage or sewerage?—In some parts of the suburbs, near where the manufactories are, there are several open sewers; I did not investigate the houses there, I merely went round; I had not time to visit every house, and I had no instructions to that effect, but I went there for the purpose of obtaining a general view; many drains were open, and it was very offensive.

2345. Were those in the immediate vicinity of houses inhabited by the working classes?—Yes.

2346. Did that neglect of covering them over appear to be noxious?—It could not be otherwise.

2347. Did you look to the state of the schools for the lower classes?—I went into them, and I found them very much on a par in their physical condition with the schools I have so frequently described in the cases of Manchester and Liverpool.

2348. Were the day and the dame-schools of the same description as you have found in other places?—Yes.

2349. Were there any play-grounds where the children might be able to take exercise in the intervals of school?—No; there were no play-grounds at all.

2350. They have no convenience of that sort, except being turned into the streets?—No, none at all. The lodging-houses I had an opportunity of visiting, and taking down the number of the inhabitants, and ascertaining the character of the parties; there are an immense number of persons residing in them, as many as 50 in a house; from 30 to 50; and in one room I have seen three beds, in which a man, his wife, and daughter, a grown-up young woman, slept in one bed, and two married couples in the other beds, one having a child; and I have seen many instances where persons of both sexes were sleeping in the same room in different beds. I ascertained the habits of the persons coming there; they are generally of a very questionable character the persons coming to those lodgings; and the proprietors of the lodging-houses are not very willing to afford information, but by dint of a little application, I obtained a good deal of information respecting them; most of them were persons of bad character.

2351. Were the houses in a neglected state as to ventilation and cleanliness?—Many of them exceedingly offensive and unfavourable to health; I found one house in the central ward, in which there were three cases of fever at the time I visited it.

2352. Those houses are resorted to by persons of a shifting or migratory character?—Yes.

2353. So that if they take any disorder it is apt to spread?—Yes.

2354. Is there any precaution taken, or other sanitary regulations with regard to those lodging-houses?—No, not at all.

2355. That is entirely neglected?—Yes.

2356. Does not some system of regulation of that kind appear to be desirable for the sake of the health of the community?—I think they should be subjected to some sort of inspection.

2357. Were the rooms close, and had they noxious vapours in them when you went in?—Frequently they were very unwholesome; I was obliged frequently to go out.

2358. Were there many of those houses in Hull?—I should say there were nearly 100 of the worst description; I am alluding to those which I consider highly injurious to the physical and moral welfare of the people.

2359. Lord *J. Stuart.*] Are they without any regular system as to the removal of filth by the scavengers?—Quite so; in those courts they are precisely in the same state as they are in Liverpool, with the exception that the people seem themselves to be a little more anxious after cleanliness.

2360. *Chairman.*]

Mr. *J. R. Wood.*

8 April 1840.

2360. *Chairman.*] There are no cellar habitations?—No.

2361. They could not have cellars without being below the level of the water, could they?—No, I should think not.

2362. Mr. *Vigors.*] There are very few Irish in Hull?—The number of Irish is very small there.

William Henry Duncan, M.D. called in; and Examined.

W. H. Duncan, M.D.

2363. *Chairman.*] YOU are a physician, living at Liverpool?—I am.

2364. Have you been residing there for some time?—I am a native of Liverpool.

2365. You are well acquainted with the town, and have been for many years past?—Yes; I have been physician to the dispensaries for 10 years; in fact, ever since I have been in practice.

2366. You are generally acquainted with the state of the dwellings of the working classes, and their general state, in the town of Liverpool and the suburbs?—I have been in the constant habit of visiting the patients of the dispensaries in all districts of the town.

2367. What is the population at present?—By the census of 1831 the population of the parliamentary borough was about 205,000; now I suppose it will be 250,000, estimating the increase not to have gone on in the same ratio as formerly; it had increased 40 per cent. during the former 10 years, but I should think not more than 25 per cent. since that; the increase had been so very great before, that it has not increased in the same ratio since.

2368. A very great increase has taken place in the buildings, in various directions?—Yes, very great.

2369. Are you acquainted with the account published by the Statistical Society of Manchester of some particulars regarding the situation of the working classes in Liverpool?—I only know what is stated in the report on the subject of education in Liverpool; it is confined very much to the state of education.

2370. A statement was made of the number of cellars occupied as permanent dwellings, both by day and night, in the parish of Liverpool, and the remaining portions of the borough, which turned out to be 7,493?—Yes; and I have made an estimate of inhabited cellars at the present time; I think 8,000 will not be at all an over-estimate; an accurate account was obtained of the number of inhabited cellars two years and a half ago by means of the police, and it was at that time between 7,800 and 7,900.

2371. There have been two accounts, the one stated by the Statistical Society, of 7,493, which was in the year 1835; then that was examined and tested by the local authorities at Liverpool, and the amount signed by Mr. Whitty, the head constable, in which it was found that the number was 7,862?—Yes.

2372. Have any been built since?—Yes, a good number; I have allowed only 140 for the two years and a half, so that it is rather under than over the mark.

2373. It is stated that a great portion of the inhabited cellars are dark, damp, confined, ill-ventilated, and dirty; have you any doubt of the accuracy of that account?—None whatever; it is quite correct.

2374. It is stated also, that taking the working population at two-thirds, the whole of the persons living in cellars amount to one-fifth of the whole number?—It is rather over than under one-fifth of the working population; I have data on which I have estimated the number of the working population at 175,000 out of 250,000; I calculate that out of that number 38,000 live in cellars; that is allowing rather less than five inhabitants, four-and-three-quarters, in each cellar, for which I have also statistical data.

2375. You have no doubt of the correctness of that calculation?—No.

2376. You refer to the cellars before described?—Yes. Mr. Whitty, the head constable, mentioned to me, two days ago, that he had no doubt five was a proper estimate.

2377. Mr. *Cowper.*] Do those cellars contain more than one family?—Yes; frequently two or three, or more, families.

2378. Have you prepared an account of those separately inhabited by more than one family?—I have not, but I have a statement of the average number.

2379. *Chairman.*] According to Mr. Whitty's estimate, there would be 40,000 out of the population of Liverpool residing in cellars?—Yes; but I think he has rather over-estimated it; I think there are about one family and a half on an average inhabiting each cellar in the worst districts of the town; rather under that, taking the average of several hundred cellars which were examined.

W. H. Duncan, M.D.

8 April 1840.

2380. That report also states that there are in the borough of Liverpool 2,271 close courts, and that no court was counted in which at least two families did not reside, and above one-third of the whole number contained six or more families, and it is added that few of the courts have more than one outlet?—That is quite correct; six years ago I counted the number of courts printed in the Directory of Liverpool; at that time there were considerably upwards of 2,000; I estimate that now there are 2,400.

2381. Courts of the description referred to, with only one outlet?—Yes, generally speaking; there are some which have two outlets, but the great majority, particularly of the old courts, have only one communication with the street through a narrow archway of three feet wide, the upper part of which is generally built up; the width between the two rows of houses varies from perhaps nine to 15 feet; I have a diagram here to explain the structure of the courts.

2382. It is unnecessary to ask you much of the construction of the courts; is that extremely injurious to health?—There can be no doubt of it; it prevents proper ventilation.

Vide Plan.

[*The Witness produced a Diagram, showing the nature of the Courts.*]

2383. Not only is the end of the court built up, but the end which is open is considerably narrower than the court itself?—Generally speaking, in the great majority of courts; very few have an entrance wider than four feet, and that is usually by an archway covered over; the houses in front of the street are generally built over it.

2384. The width of the courts is, you say, from nine to 15 feet between the rows?—Yes; there are many only six feet.

2385. The construction would appear almost as if it was contrived for the purpose of preventing ventilation?—Yes; further on (in the diagram) there is another court; the backs of the houses in this court are built against the backs of the houses in the other court.

2386. There are courts in which not only there is this construction followed, but the houses in rows, forming the court, are back to back with the houses forming other courts?—Yes, that is the case in the majority of instances.

2387. So that no ventilation can pass through the court?—No; and at the further end there is generally a privy, or two privies, with an ash-pit between the two privies, and those are generally in a very bad state; there are frequently no covers to the ash-pit, and no doors to the privies; they are in the most abominable state of filth.

2388. Mr. *Cowper.*] Are those the only conveniences in the whole court?—Yes; and in some instances not only to the whole court, but to the whole street, for the inhabitants of the whole street frequently make use of those privies, having none of their own.

2389. *Chairman.*] Is it generally the case that the outlet to those courts is only a passage under a house?—In most of the older courts that is the case.

2390. So that that one outlet admits very little air to the court?—Yes; but in many of the courts more recently built the entrance is wider and not built over.

2391. It is unnecessary to ask you whether a construction could be contrived more likely to be prejudicial to the health of the inhabitants of those courts?—It is scarcely possible to conceive of any, considering the population of those courts.

2392. What is the average population of those courts?—I think the average is between six and seven inhabitants to each house, and calculating the number of houses in each court at six, that would make about 36 or rather more in each court; so that on that estimate there will be 86,400 of the inhabitants of Liverpool living in those courts.

2393. Are those chiefly of the working classes?—Entirely; except, perhaps, that a few of the better kind of courts in Liverpool may be inhabited by shopmen and small shopkeepers, and persons of that class.

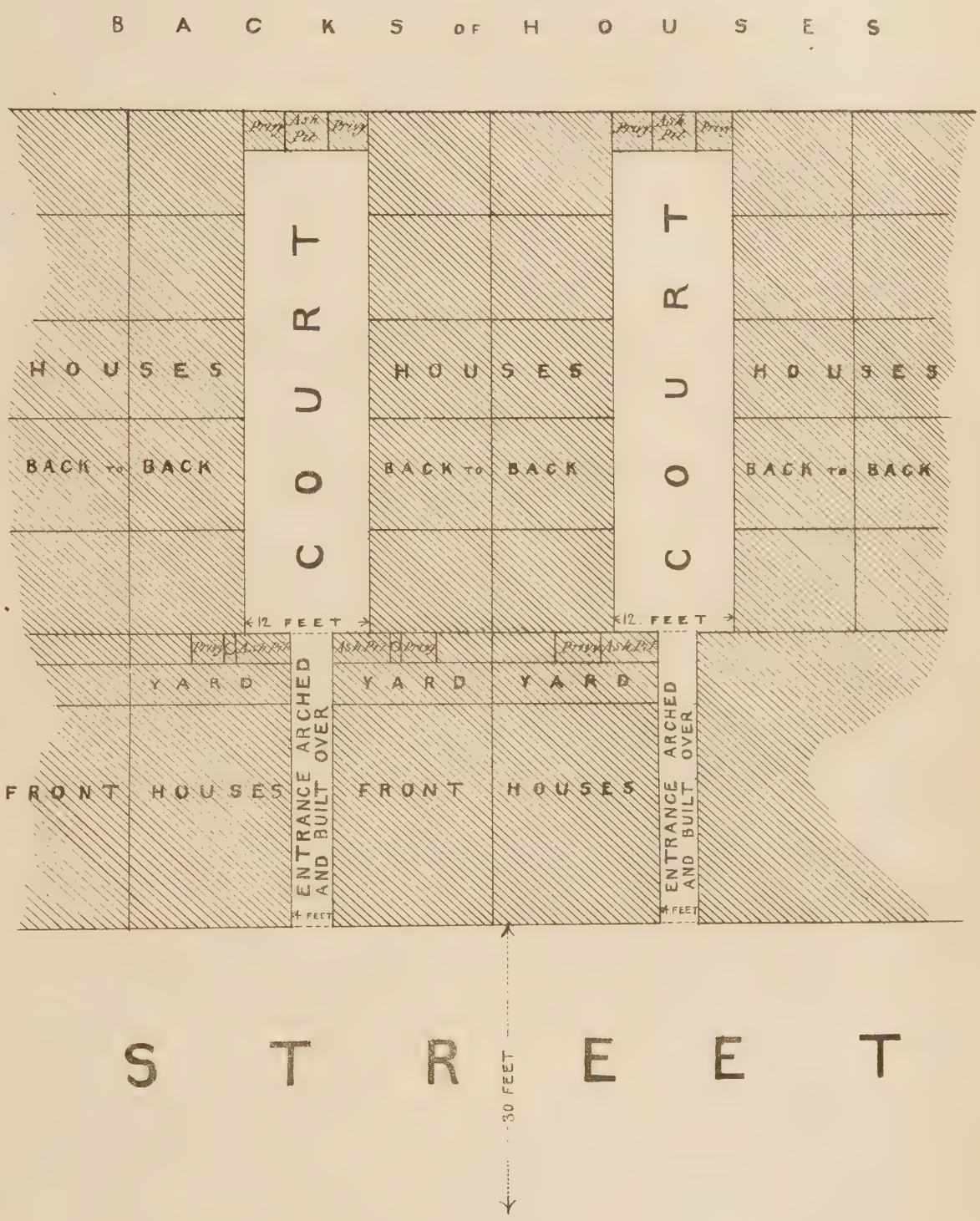
2394. In addition to the 38,000 and upwards living in underground cellars, there are 86,000 of the working classes living in those close courts in Liverpool?—Yes.

2395. Lord *James Stuart.*] Is there any communication by drains to the common sewer?—None; I do not know of any court in which there is an underground drain; I frequently made the inquiry, from having been led to notice the state of filth in which most of the courts were; in fact, in the main streets, in the greater number of those inhabited by the working classes, there are no sewers.

2396. *Chairman.*] Are the Committee to understand that there are neither sewers nor underground drains in those courts?—None whatever.

2397. What

In Dr Duncan's Evidence.



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W. H. Duncan, M.D.

8 April 1840.

2397. What is the state of cleanliness, or filth, or neglect in those courts in consequence?—They are generally extremely filthy; all the refuse from the houses in the courts is thrown into the ash-pit in the upper part of the court, or into the court itself, or carried out into the street and allowed to lie in the middle of the street; the scavengers come once a week, I believe, to remove the filth from the streets.

2398. Are those bye-streets?—They are marked out in the plan as 30 feet wide; that is wider than the average; the average of the streets in which the poorer classes live is only about 25 feet.

2399. Do the scavengers come only once a week?—Yes.

2400. Do they clear out the filth from the courts?—No; the courts are entirely neglected; in fact, the ash-pits are frequently suffered to overflow and to run over into the court.

2401. In what state are the privies?—Many of them in such a state that they cannot be used.

2402. Mr. *Cowper*.] Does it often happen that the houses contain more than six inhabitants?—In one court 45 feet by 10 there are eight houses, containing 118 inhabitants; that is an average of about 15 inhabitants to each house.

2403. Lord *James Stuart*.] How many human beings occupy any of the rooms?—There are only three rooms in those houses, and I have known four families live in one room, about 10 feet square; that is not a very frequent occurrence; in cellars frequently that is the case.

2404. *Chairman*.] The dirt and ashes and refuse are laid in the streets, and there suffered to putrefy for a considerable time?—Yes.

2405. It is unnecessary to ask whether the smell is not extremely noxious, particularly in warm weather?—In some of the courts it is such, that though I have been used to those things, it is almost impossible to remain for any time in the courts.

2406. Have you any doubt that this is most noxious to the health of the inhabitants, and injurious to their comfort?—There can be no doubt that it is noxious to their health; that appears from the great mortality of Liverpool.

2407. Do you know whether fevers have prevailed in Liverpool?—Yes; fever is the great complaint of these people.

2408. Does that arise in any measure from the want of ventilation and cleanliness in their dwellings?—There can be no doubt of that; I found fever most prevalent in those districts where there is most neglect of cleanliness and ventilation.

2409. Does fever prevail much in those districts in consequence?—Very much indeed.

2410. Can you give any facts with respect to any particular localities where fever has been for a length of time, or where it frequently prevails?—I can state the average number of cases of fever attended annually by the dispensaries, and the proportion of those occurring in courts; the average annual number attended during the last five years was upwards of 5,000, and that was exclusive of the cases occurring among the members of clubs and friendly societies, of which there are many in Liverpool; that is about one in thirty-five of the whole working population; the proportion of that number in the courts was about two-fifths, and between one-quarter and one-third in the cellars.

2411. Are there any cases in which families reside in cellars in courts?—Yes; some of the courts have inhabited cellars and others have not, but frequently the families live in cellars in those courts; but the proportion of cellars in courts is very small.

2412. There is no ventilation in the cellars?—No; very frequently there is no window to the cellar, the top of the door in many instances is not above the level of the street, and the descent to the cellar is by very narrow steps, only so wide as to admit one person; so that there is neither light nor air; and in general there is no floor.

2413. There is no thoroughfare for air at the back?—None; in some instances the cellar is divided into two; that is, there is a back room, perfectly dark, in which the family sleep.

2414. Lord *J. Stuart*.] Have they, generally speaking, a supply of water?—Generally speaking, there is a supply of water; but they often complain of its being insufficient, and of its being irregular.

2415. *Chairman*.] Is there any calculation as to the average mortality in Liverpool, referable to those particular causes?—No, I believe not; but I have facts

W. H. Duncan, M.D.

8 April 1840.

pointing out the noxious effects of the cellars on the inhabitants with regard to fevers. The proportion of cases of fever occurring among the inhabitants of cellars is about 35 per cent. more than it ought to be, calculating the proportion of the inhabitants of the cellars to the whole working population; that shows that the inhabitants of the cellars are much more liable to be affected with fever than the inhabitants of other dwellings.

2416. The inhabitants of the cellars are more frequently attacked with fever, in consequence of their dwelling in those unhealthy abodes?—Yes, in those damp and unhealthy situations. I may mention, in respect to the dirt accumulating in those places, in one cellar where a family resided, I was told the other day, by an agent of the town mission, that they had collected about three cart-loads of manure out of the streets and courts, and kept it in this cellar where they lived.

2417. Is there any system of inspection, by any recognized authority, of nuisances in those closely-peopled courts, for the purpose of removing them?—None whatever; no inspection of any kind.

2418. Is there any system of inspection with regard to drainage, sewerage, or the carrying away of the refuse water from those habitations of the poorer classes?—None; they are at present making sewers in the streets in Liverpool; about 100,000 *l.* have been expended within the last 10 years in main sewers; but it is still very imperfectly sewered; and after this year they will have no power to raise a further sum upon the town.

2419. Mr. *Cowper.*] Is the rate levied on the whole borough?—On the whole parish, which is somewhere about four-fifths of the Parliamentary borough.

2420. *Chairman.*] That does not extend itself to the suburbs?—It does not; it is confined to the parish. There have been about 10,000 *l.* raised each year the last 10 years; but the local Act expires this year.

2421. Lord *J. Stuart.*] What is the population of the parish?—I suppose it is about 190,000, the total being 250,000.

2422. *Chairman.*] Do you know whether in the local Act there is any power to oblige houses to communicate by underground drains with the sewer?—None whatever, and I believe the inhabitants are not allowed to do so without applying to the Commissioners.

2423. Is there any power to prevent cesspools or other receptacles for wet and filth being sunk below the level of the sewers?—I am not aware that there is; the sewers are not intended for carrying off the refuse of the privies and cesspools, but merely the surface water from the street.

2424. In general, in London, the sewers are intended to carry off the water from the sinks, and so on?—Yes; frequently that flows out into the streets and is carried off; and there is sometimes a narrow channel on the surface of the ground which allows the water to run from the courts into the streets; but very frequently that is choked up with refuse and dirt and filth, so much so, that it is difficult to get into the court.

2425. Lord *J. Stuart.*] You have stated that the scavengers never go into the courts?—No; they are considered as private property.

2426. How long do they remain in that state of filth without being cleared out?—I should suppose sometimes they remain for a year without being cleared out, from the state in which they are.

2427. *Chairman.*] Can you state the mortality of Liverpool?—Last year it was 1 in 33 ½.

2428. Can you state the proportion in the previous years?—I am afraid I cannot state it correctly until the time of the Registration Act. In 1811, according to the account furnished by the parish clerks, it was 1 in 31; in 1821, it was 1 in 32; in 1831, it was 1 in 32. The Registration Act came into force in the middle of 1837; in the last half of 1837, it was 1 in 28; in 1838, it was 1 in 37; in 1839, 1 in 33 ½.

2429. Can you state what it was in the year of the cholera?—I am not able to state that; but it was not so great as in the last half of 1837.

2430. Did the cholera prevail much in Liverpool?—There were 6,000 or 7,000 cases.

2431. Did it prevail in those districts you have referred to?—Yes, a large proportion of those cases occurred in cellars.

2432. In the midst of the neglected population you have stated?—Yes.

2433. Have you any doubt that measles, small-pox, scarlet fever, and other disorders of that nature are very much aggravated in their effects by the miserable

state

state of the dwellings of this great body of the population you have described? —I have no doubt whatever that any disease occurring among individuals in situations of that kind must put on a more virulent form than in other districts.

2434. Have scarlet fever and small-pox been prevalent of late?—They have been very prevalent of late among the poor.

2435. You have stated the general condition of those courts and cellars; with respect to the spreading suburbs of Liverpool, in which the working classes reside, are there many houses constructed back to back, without any ventilation through them, in the way you describe many of the courts in the town are?—I am not aware of any streets of that kind without some interval between them.

2436. Are there many courts building?—Yes, a good many, particularly in Toxteth Park, a district containing about 30,000 inhabitants.

2437. Are those of the same kind as you have described?—Yes.

2438. Is there any Building Act in Liverpool?—Yes, but merely to direct the building of party-walls, and so on.

2439. There is no Act providing for the ventilation, and so on?—No; there was one attempted in 1802, but it failed, in consequence of the opposition of the builders, and other interested parties.

2440. Do the owners of those small dwellings derive from them a very considerable rent?—The cottage owners, as they are termed, are generally considered a very wealthy class of individuals; I think the average rent of houses in courts is about 3*s.* a week.

2441. Are they generally taken by the week?—Yes, almost always; in the front houses in streets, the rent is perhaps 3*s.* 6*d.* a week.

2442. Lord *J. Stuart.*] Do the landlords or the tenants pay for the water?—The landlords pay for the water, and the tenants pay 3*d.* a week, perhaps, in addition to the rent, for the water; and the poor complain that if one of the landlords is in arrear, the whole supply is stopped, or if the pipes go out of order.

2443. They may be without a supply for days or weeks?—Yes, frequently they are so, and have to borrow it from their neighbours, or go into the adjoining courts, or get it the best way they can.

2444. *Chairman.*] Is it not generally considered that investments in this small species of cottage property pay a very high interest?—It is generally conceived so.

2445. So that it is a very profitable and tempting investment?—Very much so; so much so, that a few years ago it was determined to make the owners of those houses contribute to the poor's rates. Those houses had always previously been exempt, in consequence of the inhabitants being too poor to pay; the owners opposed it, and annoyed each succeeding vestry so much, they were at last obliged to give up the point, and now they pay nothing.

2446. In fact, those properties paying this interest, and neglected as you have spoken of, contribute very little indeed to the local taxation?—I can state the amount they contribute; there are 16,800 cottages in the parish of Liverpool assessed under 12*l.* a year, and of that number only 900 contribute to the rates; the amount they contribute is 700*l.* on a levy of 10,000*l.*, and of that sum, I believe, a great portion is paid by the Conservative and Reform Associations.

2447. A very great proportion of this property, which appears to be so much neglected, does not pay any rates at all?—Nearly 15-16ths I should think.

2448. The owners are generally considered to make very good returns for their money, are they not?—It is considered to be a very good investment.

2449. Is this property, generally speaking, as it respects the comfort of the inmates, so much neglected as it is in the instances you have stated?—The landlords do not appear to regard the comfort of the inmates; if any repair is required about the houses, it is sometimes weeks or months before it is done.

2450. The object appears to be to get the utmost which can be got out of the people, and to do as little as possible?—Exactly so.

2451. The whole of this property is exempt from almost all the local burdens? —Yes. The inhabitants have complained that they have applied to the landlords to make a drain to carry off the refuse from the courts, but that they cannot get them to do it, though they have applied again and again.

2452. Have you any doubt that some legislative Act, giving power to the local authorities for the purpose of cleansing and improving the state of those neglected courts is necessary?—None whatever; I think that it would be the means of reducing the mortality of Liverpool very much if an efficient plan of inspection

W. H. Duncan, M.D.

8 April 1840.

were carried into effect; if power were vested in some officer or Board to regulate the dwellings of the poor.

2453. Do you not think that the state of neglect, dirt, and filth that you have described, must have the effect of making the inmates of those places uncomfortable and discontented with their condition?—There is no doubt whatever that with persons living in the midst of dirt and filth, their physical condition reacts on their moral condition.

2454. Have you any doubt that it has a very great effect on the physical and moral condition of the children of those classes?—I have no doubt of it; I can mention instances. With regard to those courts which generally are not flagged, they are paved with small stones; the stones get broken up, and the holes are filled with water and filth, and it is so difficult to keep them clean, the inhabitants do not attempt it.

2455. Lord *James Stuart.*] Are they never inspected at all?—No; they are seldom visited except by the landlords or their agents, who come round to collect their rents weekly.

2456. Neither the parish officers, nor the guardians of the poor, look to them at all?—No.

2457. *Chairman.*] You have no guardians of the poor, have you?—No, we are under the old system. Where there has been any attention paid, and the courts have been flagged and put into good condition, the inhabitants have frequently made some efforts to keep them clean.

2458. Lord *James Stuart.*] The streets are kept by the Commissioners of Paving, and so on?—Yes.

2459. Are all the thoroughfares kept by them?—Not all the thoroughfares, only the principal thoroughfares; all those properly called streets, but there are some with narrow entrances, of which they take no cognizance.

2460. You conceive that there are 124,000 of the working classes of Liverpool, living either in those unhealthy cellars, or those neglected and miserable courts?—Yes; but I should state that there are many front houses in the streets that are even worse than those in the courts; what are called lodging houses, where there are thirty or forty collected sometimes in one house.

2461. Are those in bye-streets?—Yes.

2462. Referring to this immense number of persons living in those neglected and miserable abodes, can you have any doubt that even if their children go to a school during the day, and receive instruction and advantage from their schooling, it is in a great measure neutralized by the bad effect of the evils and dirt and filth which they see around them at their homes?—I have no doubt whatever of that, if you refer to moral and religious instruction.

2463. So that the effect of this neglect of the physical condition of those persons is to lessen the effect of that moral and religious instruction which the children may receive?—I have no doubt of that.

2464. Mr. *Cowper.*] Have you found any difference in the physical condition of those children and that of other children?—In general they are more delicate and weakly.

2465. Lord *James Stuart.*] Is there any proportion of Irish and Scotch among them?—A very large proportion of Irish, comparatively very few Scotch; I suppose about one-fourth are Irish, or rather more. I think there are about 60,000 Irish in Liverpool, almost all of the lower classes; the Scotch population is increasing, a number of engineers having come lately, but I suppose not more than 6,000 or 8,000 of the lower classes, if so many, are Scotch.

2466. *Chairman.*] Does spirit drinking prevail much among the working classes in those districts?—Very much; among the females particularly, and among the Irish.

2467. Does it prevail among the working classes generally?—Yes; but it is more common with the women than the men. The Englishmen in general drink ale.

2468. Lord *James Stuart.*] How do those poor people get medical relief?—From the dispensaries, from which 40,000 get relieved annually.

2469. *Chairman.*] Do you not think that, laying aside the question of the comfort of those persons, a great saving would arise to the richer classes and the parochial authorities, if some regulation were made to improve the comfort of their dwellings, in lessening the poor-rates?—There is no doubt of that. It was remarked to me, a few days ago, by one of the inhabitants of these courts, pointing out the state of filth, that the landlords would do nothing for them; that he thought the parish ought to do it; that they would save as much as would keep the court in proper

proper order, by preventing a number of persons being sent out of the courts with fever (referring to the hospital to which they are sent); and that he thought the parish would be repaid, in the reduced amount of the rate, by so doing.

2470. Mr. *Cowper.*] Do you know the expense of the Fever Hospital?—I suppose 2,000 *l.* or 3,000 *l.* a year.

2471. *Chairman.*] Does it not happen that one or other of the parents is frequently carried off by fever, leaving the children dependent on the parish?—Very often. That is not the whole expense arising from fever, for there are also dispensaries; and the parish subscribe 500 *l.* a year to the dispensaries.

2472. Mr. *Cowper.*] Do you find different disorders prevailing in different localities?—I have found fever prevailing most in the ill-ventilated courts and cellars, where there is much filth accumulated; and in the cellars also I find rheumatism very prevalent; they are very damp; the sun's rays never have access to some of them, and no air gets to them.

2473. What disorders do you suppose are occasioned by impure atmosphere and noxious exhalations?—By noxious exhalations, principally fevers.

2474. Ague?—In some situations; there is not much of that in Liverpool; but generally speaking, fevers in different forms; remittent or typhus fever.

2475. Do you find there severe rheumatisms, which you do not find in other habitations?—The larger proportion of cases of rheumatism occur in cellars; these are generally damp; very frequently there is no floor of any kind; the inhabitants sleep on the bare earth; I have known 30 persons sleeping in a single cellar; in some of the cellars, kept by lodging-house keepers, they merely cover the floor with straw, and allow as many persons to come as there is room for, charging them 1 *d.* per night.

2476. *Chairman.*] In your opinion a system of prevention of disease, independently of the comfort it would afford, and the content it would give, would be the cheapest mode to the parochial authorities?—In the first instance, at all events, there would be great expense in putting those places in a habitable state; but I think in the end it would certainly diminish the poor-rates, and the necessity of relief to the people themselves, and to the widows and orphans of those that have died.

2477. Have you any doubt that the neglected state of persons in that situation leads to lessening of their energy for work, and their industrious habits, and active exertions for themselves?—I think, generally speaking, that the more miserable people are, the less they are inclined to labour to improve themselves, and better their situation; and the smaller their chance of improvement, the greater is their apathy.

2478. If they saw a probability of their condition being improved, would not that have the effect of stimulating them?—I have no doubt it would.

2479. Lord *J. Stuart.*] Are there any churchyards or burial grounds in that densely-peopled district?—Not immediately in the worst districts; there is one I have felt to be offensive; St. James's.

2480. *Chairman.*] Are there many lodging-houses in Liverpool in which many of the most destitute classes congregate?—Yes; sometimes 30 or 40 in a house; but frequently those houses contain more than three rooms.

2481. Is that a population which is shifting?—Yes, and a great number of Irish resort to those houses.

2482. Many remain only for a night or two?—Yes, paying from 1 *d.* to 3 *d.* or 4 *d.* for a bed.

2483. Are many of those lodging-houses in a very filthy condition?—A great proportion are in a very filthy condition; I was in one a few days ago, where I was obliged to go out immediately, from the smell; I found a great quantity of filth collected in the cellar, and no attention to cleanliness; in fact these things do not appear to annoy the inhabitants.

2484. They are in their present state almost public nuisances?—I should say so, were it not that those who would feel them as nuisances seldom come into contact with them, except medical men, who are obliged to do so.

2485. In those lodging-houses are fevers and contagious disorders frequent?—Very frequent indeed; there are three lodging-houses in one street, which open behind into a very filthy court; in those three houses 46 cases of fever occurred in six months.

2486. Have you any doubt that, adverting to the migratory and shifting character of the population, fevers and contagious disorders are frequently carried by them into other districts of the country?—I am not aware of any facts to show that, with regard to Liverpool; but it appears to me extremely likely.

2487. Does

W. H. Duncan, M. D.

8 April 1840.

2487. Does it not appear important that some sanitary regulations for the safety of others should be made?—I think the lodging-houses should be inspected periodically; not more than a certain number of inmates should be allowed; and with regard to both the cellars and the lodging-houses, it ought to be compulsory on the landlords to whitewash them to keep them clean.

2488. Is there any system of regular inspection at present?—None whatever; where fever is prevalent, on the recommendation of the officers of the dispensary, the parish officers send some one to whitewash the rooms or cellars.

2489. Are you aware whether they have legal power to do that?—I am not aware that they have.

2490. There is no system of inspection, nor any power to compel drainage or ventilation, or anything of that kind which will tend to the public good?—None whatever; I am not aware that any public board has authority to interfere.

2491. Do not you think such a power would be very important?—Very important indeed, for the public good.

2492. Can you state the number of those lodging-houses?—I cannot; there is a very large, floating population of Irish; sometimes they are only a few nights in the town; about 5,000 are "passed" over to Ireland yearly by the parish authorities.

2493. Are the lodging-houses generally in the state you have described?—Yes; I can give instances where a large proportion of the inhabitants of those lodging-houses have been affected with fever.

2494. Are there any reserved spaces or places for public walks, where the inhabitants are enabled to take exercise?—There are none except St. James's Park, and the two cemeteries, and the Pier Head.

2495. Are there any places where the working classes can take exercise at periods when they are able to do so?—The Pier Head; they walk along on the side of the river.

2496. There is no open ground?—None, excepting those I have mentioned.

2497. Mr. *Cowper.*] Do the poorer classes walk there on Sundays?—Yes, the Pier Heads are quite crowded on Sundays.

2498. *Chairman.*] Is that sufficient for the wants of that great town?—I think that if large open spaces, of several acres in extent, could be introduced into the centre of some of those populous districts, it would be very conducive to the health of the town.

2499. It appears to be impossible to effect that in a town already built; but would not the reservation of some place to which they might go on holidays or Sundays be extremely valuable?—Certainly.

2500. Mr. *Cowper.*] If it were within half-a-mile, they might walk out?—Yes, if there was any inducement to them to do so; but I do not know that they are at all aware of the noxious influence of the situations in which they live, and of the want of fresh air and light, and of the nuisances and filth collected round them.

2501. *Chairman.*] Have you any public baths in Liverpool for the lower classes?—Not for the lower classes.

2502. Would it not be of advantage to the health of those poorer persons if there could be any commodious place provided where they could have the benefit of bathing?—It would be a very great advantage indeed.

2503. Would it be difficult to provide that?—I do not think it would; there are a great number of steam-engines erected in Liverpool, and the water could be provided at a small expense.

2504. Mr. *Cowper.*] Do you think they would be willing to avail themselves of them, if they were provided?—I am afraid not, to the extent that would be desirable.

2505. *Chairman.*] On the banks of the river it would not be difficult to provide apartments where they might dress and undress, so that they might avail themselves of the advantage of bathing?—That could not well be done along the line of the wall; they must go some distance along the shore before they could get to a place of that kind, and if they went so far, that kind of place would not be required.

2506. In proportion as those humbler classes are educated and become intelligent, they are more likely to take advantage of any privileges which may be afforded them for the improvement of their health?—Certainly.

2507. Have you not frequently found, in visiting those abodes of the working classes, that they are ignorant of the noxious effects arising from the shutting up every cranny and corner of their dwellings, and that the evil arising from the want of ventilation is a thing they do not understand?—They seem to be utterly ignorant on all those points; they have no idea whatever of the prejudicial effects of those things.

W. H. Duncan, M. D.

8 April 1840.

2508. The physical evil they suffer from the want of ventilation is aggravated by their own ignorance?—I believe that to be so.

2509. That ignorance arising, of course, from the want of instruction on such subjects?—Yes.

2510. Any plans, of whatever nature, for the improvement of their physical condition would be facilitated by means of their becoming more intelligent, and receiving instruction?—I have no doubt of that.

2511. Are there any suggestions which you conceive would be useful to the Committee upon these subjects?—I have some facts showing the very unhealthy nature of some particular situations, where there was an unusual quantity of filth collected. In one court I visited the other day I found that the whole place was inundated with filth, having a most intolerable stench, and I found that it proceeded from two ash-pits in the adjoining courts having oozed through the wall; the liquid portion of it had oozed through, in consequence of the imperfection of the wall, and the nuisance was so great that one of the houses had not been inhabited for three years until just before, when the landlord flagged the floor, to prevent its oozing through; but still it oozed through. In that court there were 63 cases of fever in 12 months; there was no drain whatever to the court. Part of the court belonged to one landlord, and part to another; one of the landlords had offered to be at half the expense of making a drain, if the other would subscribe; but he would not, and in consequence of that nothing was done. I met with a very intelligent man who lived there, who said the court was never free from disease; that fever was constantly occurring there.

2512. What was the name of that court?—Union-court, in Banastre-street. In another small court, containing four houses, the smell arising from the uncovered ash-pits, and the ruinous privies and the filthy state of the court was such, that an Irishman, one of the inhabitants, said, the smell was bad enough to raise the roof off his skull, that was the expression he used; in that case the court was never free from disease; there were 17 cases of fever in the year.

2513. What was the name of that court?—Spencer-court, in North-street. In another court, with eight houses, containing 118 inhabitants, 44 cases of fever occurred in the year, that is to say, more than one-third of the inhabitants of the court were affected with fever. In regard to the cellars, there was one cellar in Preston-street where about 30 individuals used to sleep every night; in the centre of the cellar in which they were living there was a hole dug, which was used as a receptacle for all kind of filth; fever broke out there, and six or eight died out of the number, and those who were ill of the fever were lying close by the side of those who had died; there was one dead man lying there at the time.

2514. In what year was this?—It was five or six years ago that this case occurred. I attended a child lately with small-pox, in a cellar of that kind, that lay on the floor; they would not allow it to be sent to the fever-ward, nor in the other case would the friends of the patients allow them to go; that child lay along with other children; I think 15 individuals slept there, in a space of 10 or 12 feet square, every night.

2515. Mr. *Vigors.*] How long ago was the case you refer to of the child?—Only two months ago. With regard to the cellars, the water from the privies in the court frequently gets through the mud and through the walls of the cellar, and sometimes as much as two feet of water of that kind lies on the bottom of the cellar. I was told by one agent of the Town Mission, a few weeks ago, the fact, that they frequently make holes or wells in the floors to collect the water and prevent its covering the bottom of the place. In one case he found a bed used by the family immediately over this collection of filthy water.

2516. Such a circumstance must be very prejudicial to health?—No doubt it must be. In one case also, which I did not see myself, I was told by the superintendent of the Town Mission, a few days ago, that he went into a cellar, and found that the floor was covered with water to such an extent, that they were obliged to take the door off its hinges, and lay it on four bricks, to keep them from the wet; and in the same cellar there was an opening broken through the wall in the back; he found this was for the purpose of enabling them to throw their refuse into an ash-pit or dunghill behind, to save them the trouble of going round through the court and throw it in there; they have very little idea of the prejudicial effect of things of that kind. There is one street, about 200 yards long, Oriel-street, containing 1,558 inhabitants.

W. H. Duncan, M.D.

8 April 1840.

2517. Are those of the working classes?—Almost entirely; there are not above six or seven houses inhabited by persons in a better condition; in that street there were 335 cases of fever in the year.

2518. When was that?—That was in 1837; of those 335 cases 236 occurred in courts; so that more than one-fifth of the whole of the inhabitants of the street were affected with fever; in many of the cellars below the houses in the courts of that street, ashes and vegetable and animal refuse of all kinds are kept; they are used, in fact, as receptacles for them. There are other instances of the same kind, showing the proportion of the population of particular streets affected with fever.

2519. You refer to streets in which cleanliness and drainage are not attended to?—Yes, those are some of the worst of the streets; in which there is an accumulation of filth, and animal and vegetable refuse, and abominations of every kind.

2520. Sewerage and drainage are neglected in those streets?—There is no drainage in most of those streets.

2521. And cleanliness is not attended to?—It is utterly neglected.

2522. You state that there are 86,000 of the poorer classes living in these courts, and 38,000 in cellars?—Yes.

2523. Liverpool is the second port of the kingdom?—I believe it is.

2524. Inhabited by a great number of rich persons?—A very considerable number.

2525. Wealth is increasing there very rapidly, is it not?—I believe it to be so; of course there are fluctuations in that respect as there are in all mercantile towns.

2526. There is a great increase of trade?—There is.

2527. And there has been a very great increase in the docks, has there not?—Yes; they can hardly provide accommodation fast enough.

2528. There is a great increase in the warehouses for the reception of goods from various parts of the world?—Yes.

2529. A large new custom-house has been erected within the last few years, has there not?—Yes; that is just completed.

2530. The town is surrounded for several miles with villas and houses inhabited by the richer classes?—Yes.

2531. There are pleasure-grounds, and so on, laid out round the town?—Yes.

2532. Has not the value of property increased very rapidly in the neighbourhood?—Very rapidly indeed.

2533. In short, the external appearance of the place, whether from its docks, from its warehouses, or from the general aspect of the buildings in the surrounding districts, is that of the most prosperous description, is it not?—It is.

2534. But you are able to speak with perfect confidence, being long resident in Liverpool and acquainted with its localities, to the misery of those parts of the town you have referred to?—Yes; I have had very good opportunities of becoming acquainted with their condition.

2535. Have you any doubt that a strong effort for the improvement of the condition of these premises, by a better system of regulation with regard to their dwellings, and the comfort of the places in which they live, is called for by their present circumstances?—I have no doubt that something is absolutely necessary; I have frequently spoken of it among my acquaintances.

2536. Lord *James Stuart*.] Do you observe a great deal of discontent among the poor people?—No; the great proportion of those people, I should say, are of the lowest class of Irish, and I hardly ever see a discontented Irishman; he seems quite contented in whatever condition he may be.

2537. *Chairman*.] Are there many Irish living there having families?—Yes, a great number; about one-fourth to one-fifth of the whole population are calculated to be Irish, and the proportion of Irish applying to the dispensaries and different charitable institutions for relief is much more than the proportion I have stated would give; nearly one-half of the patients who come to the dispensary are Irish, whereas I do not calculate that more than one-third of the working classes are Irish. They seem to be satisfied and contented in whatever state they are, and do not appear to have any desire to improve their condition.

2538. Is there any other suggestion you would make?—I think a great advantage would arise from the opening up new streets, carrying them through the densely-populated districts; I know one or two instances in which the health of different

W. H. Duncan, M.D.

8 April 1840.

different parts of the town has been much improved by the formation of such a street, in districts formerly notorious for their unhealthiness.

2539. Would it be an advantage to the courts to which you have referred if one house could be taken away, or a portion of a house, so as to admit of a circulation of air through the court?—There is no doubt that would be a great improvement; the outlet into the street should in all cases be entirely open, that is, not arched over; and if the court could be opened at the other end, that would be a still greater improvement; the place cannot be a healthy place until that is done; there can be no sufficient ventilation. I have compared the healthiness of one or two streets densely populated, which are notoriously unhealthy, with that of others less densely populated, the inhabitants of which are also of the working classes; I have mentioned Oriel-street, in which one-fifth of the whole number of inhabitants were affected with fever in the year. In Lace-street, another street 160 yards long, containing 1,285 inhabitants, giving an average of more than 11 in each house, there were 200 cases of fever in the year; that is nearly one in six of the inhabitants. I would compare this street with another, also entirely inhabited by the working classes, but not so densely populated, Addison-street, which is 220 yards long, containing 1,190 inhabitants; in that street only 89 cases of fever occurred in the year, being less than 1 in 13. In Primrose-hill and Cow-lane, 165 yards long, containing 304 inhabitants, there were only 11 cases of fever in the year, or 1 in 28. A greater number of cases of fever occur among the Irish, comparing the proportion of the Irish to the great working population in general.

2540. The Irish are poorer, generally?—Yes, and they pay less attention to cleanliness, and congregate together in greater numbers.

John White, Esq. called in; and Examined.

John White, Esq.

2541. *Chairman.*] YOU are the district surveyor of Mary-le-bone?—I am.

2542. You have been so for some years, have you not?—Yes.

2543. You have had considerable experience as surveyor of buildings for a great number of years past?—Yes, as my father had before me.

2544. You have a general knowledge of the building regulations, not only in London, but throughout the kingdom, have you not?—I will not say throughout the kingdom, but I know generally throughout London; and I have a little considered the building condition of Liverpool and Bristol, both of them having Building Acts, though not of exactly the same character as that in London; but those Building Acts, also, being principally directed to the prevention of fire.

2545. The principal provisions in the Building Act of London are for the purpose of insuring the thickness of party-walls, to prevent accidents from fire?—Yes, and to regulate projections.

2546. You are acquainted with the form of building which is prevalent among the habitations of the poorer classes in some parts of London, and in many parts of Lancashire, in which the buildings are constructed in close courts?—In London; I am not so much in Lancashire, for I have been only twice in Liverpool in my life; I have been more frequently in Manchester.

2547. The Committee have it in evidence that there are close courts, entering under an archway from 12 to 15 feet wide, with houses opposite to each other, built up at the end?—Yes, and such exist in London also.

2548. Have you found that there are many such in which the houses so situated are built back to back with other houses of similar construction in adjacent courts?—There are some which are exceedingly near to each other, in which the back fronts and the wings of the buildings are too near a great deal to one another.

2549. Have you any doubt that such a construction is very injurious to health, where there is no draught?—There can be no question of that.

2550. They are placed in courts in which there is no passage for air?—Just so.

2551. That would be aggravated if the houses in the courts are back to back to other houses, so that there can be no outlet at the back windows?—Most undoubtedly. My father, who took great pains in the establishment of Mary-le-bone, induced the Duke of Portland to agree to the suggestion, that no part of the lately-built portion of the estate should have any return of corners of the buildings built up; and in Devonshire-place, and all the better streets, such as Harley-street, the return corners are not built up.

John White, Esq.

8 April 1840.

2552. If such a regulation is advantageous and necessary for the houses of the richer classes, who have good food and plenty of exercise, is it not more particularly necessary in constructing the residences of the poorer classes?—There is not a doubt of that, especially where they are not amply supplied with water.

2553. In your opinion there should be some regulation to prevent the construction of houses in those crowded courts, without air passing through them, and to prevent the building of houses back to back?—I think there should be some general law on the subject. When I was employed to draw up the Building Act, in the year 1829, Mr. Griffiths, the police magistrate of Mary-le-bone, suggested that there should be a clause prohibiting houses being built nearer to each other than the houses themselves were high; as, for instance, a 30-feet house, if such were constructed, should not be nearer to its opposite neighbour than 30 feet; that that should be the least.

2554. There would be no difficulty in general regulations in a Building Act, without interfering too much with buildings, preventing their construction in such a form as was found by experience to be injurious to health?—As to the front, there would be none; as to the backs, there would be more difficulty; it would be almost too great an inroad on private property to prevent persons building in their back courts, or yards, I fear.

2555. Do you think it would not be practicable to prevent houses being built back to back, if such a construction was shown to be absolutely injurious to the health and comfort of the inhabitants of those districts?—It is essential that it should be so, but I fear a great deal of difficulty would occur in fixing the limit precisely, but I think it essential that there should be some regulation of that kind.

2556. In order to admit at least some portion of air to pass through?—Yes.

2557. Do you think there should be prospectively some regulations to discourage the building of cellar dwellings, in the first instance, for the working classes?—I think there would be no difficulty, because the Building Act of London separating all buildings into classes, that which is the lowest class might have a clause preventing basement buildings for habitations, unless there was an ample area or fore-court.

2558. There would be, you think, no objection, on due consideration, to such a Building Act being drawn as would much conduce to the improvement of the habitations of the working classes generally?—There is not a doubt of that; and I have been asked, at the town of Andover, to interfere to see whether I could suggest something that would take away their common cesspools.

2559. You think there is nothing at all impracticable in a general Building Act, the particular regulations of which would be carried out by the local authorities, but which would be applicable generally?—No.

2560. Do you not think that some such provision is necessary in the crowded populations of the large towns in this kingdom?—I have no doubt of that; that it would very much increase the value of the property there.

2561. In your opinion, such a provision would tend to diminish disease, and increase comfort, and lessen discontent, and moreover, to lessen the amount of the poor-rates, from the illnesses to which the poor are now subject being decreased?—I am of that opinion; but on no account should their residences be rendered too expensive; they are already sufficiently expensive; for the poorer class of lodgings cannot be got for less than 3 *s.* 6 *d.*; that is a large sum for the lower classes to pay.

2562. Do you not think that whatever is absolutely necessary for the health of the humbler classes ought to be looked to by the general government?—Most undoubtedly; it would be merely the sacrifice of the ground landlord, in the first instance, allotting a little further space, and not being so greedy of his ground.

2563. Are you acquainted with any instances in which persons, desirous of making the highest possible interest of their money, run up houses for the humbler classes, without reference to the health of the inmates?—Certainly.

2564. Do not such regulations as those referred to appear absolutely necessary to meet such cases?—Certainly.

2565. A good system of drainage and sewerage appears to be highly important for the good of the people?—I have been nearly 40 years a commissioner, and have had great reason to approve the proceedings of the commissioners.

2566. What district is that?—Westminster and part of Middlesex.

2567. Do you not think that an improved system of drainage is highly important?—I am

—I am quite satisfied it would be for the improvement of the large towns in England if no attached houses were to be built without sewerage being put down in the first instance.

2568. You think a good system is of the first consequence?—Most undoubtedly; because if it be not set out in the first instance, and the sewerage arranged so that the general district should be drained, it would occasion much expense; we have laid out 20,000*l.* or 30,000*l.* in correcting evils which have been suffered to exist.

2569. A good system, in the first instance, would be highly important?—Most important, and the proprietors of land ought to be obliged to comply.

2570. You are aware there are no regulations laid down applicable generally throughout the kingdom?—No; there are commissions, but they all proceed on the statute of Henry the Eighth, which has not, properly speaking, reference to building districts, but to the draining of the country, but which has been strained in order to render it applicable to a town, though not applicable in itself.

2571. Those local commissions are, generally speaking, applicable to a period before under-ground drains existed in the districts, and are not applicable to the districts in which there are under-ground drains?—No; our commission is by an Act of James the First.

2572. Is there not a necessity for a general Act making regulations, to be carried into effect by the local authorities, for drainage, in the different districts of the kingdom?—I am quite satisfied of that; I made inquiries at Oxford last year; I found no town worse drained for suillage drainage than the city of Oxford.

2573. If one general Act was passed, it might be carried into action, according to necessity, by local authorities, without difficulty?—Beyond all doubt; even by parish vestries, if they could be made to agree; but the commissioners should be taken out of the whole town.

2574. A general Act would obviate the expense, and difficulty, and delay arising from the necessity of a local Act in each particular case?—Beyond all doubt.

2575. The consequence of the want of any general Act is, that in many instances great delay occurs, and no local Act is obtained until the necessity is shown by a great evil arising?—Yes; and then it is very difficult, and very expensive, when sewers are set out, to improve the levels.

2576. So that that would be the cheapest, as well as the most effectual remedy?—Certainly.

2577. And highly conducive to the health of the working classes?—There is no doubt of that.

2578. Some additional powers would be wanted beyond those now claimed, would there not?—Yes; I think that cesspool drainage, making an opening or sink near any house or place, should be prohibited altogether.

2579. Do not you think there should be some power to prevent any attached houses being built for human habitations until the sewerage was brought up to them?—I have already stated my opinion, that the sewers should be the first thing made before people begin to build, and that that should be made compulsory.

2580. Do you not think one necessary regulation would be, that no cesspools, or sinks, or deposits of wet and noxious articles, should be below the level of the common sewer?—It should be distinctly described, that they should be to a certain height above it, because the sewer being planted in the front of the street, there should be a proper descent into it, or it would not carry off the suillage water.

2581. You think that houses should not be allowed to be inhabited till the sewerage was provided?—Undoubtedly.

2582. Are you aware that in many districts, although the main sewer may be brought immediately in the front of the houses, there is no power of obliging the owners to communicate by under-ground drains with the sewer?—That is the fact at present, even in this district.

2583. Do you know that there are many cases in which they do not communicate?—Undoubtedly, very many cases.

2584. Are you aware of a case in the eastern part of the metropolis, where a sewer was carried up the street, where the houses communicating from one side were free from fever, and those on the other side, the owners of which could not be persuaded to communicate, had the fever, which continued?—No, I have not heard that circumstance, but I can easily believe it.

2585. You think such a power is absolutely necessary?—Yes.

John White, Esq.

8 April 1840.

2586. Would a power to enforce the arching over open drains and sewers be useful?—That would be important, for it frequently happens that a man will not carry on his sewerage beyond his own frontage; the sewer is then opened, and the effluvia and stench are prejudicial.

2587. Lord *James Stuart.*] You refer to a general Act for the whole kingdom?—Yes; it might be carried forward at a small expense, comparatively, in the winter season, when the workmen would be unemployed.

2588. *Chairman.*] Should not there be some power in the Act with respect to paving the surface of courts and streets?—Yes, and cleansing them when it is done.

2589. And for scavengers' work, clearing out deposits of ashes, dirt, and filth, and necessaries, and so on, at proper periods?—Yes, and for putting what we call gullies into the sewers in the roads; when paved, there should be proper and efficient gullies for carrying off the water.

2590. You think there ought to be some general regulations, to be carried into effect by local authorities, for cleansing and paving, and those general regulations necessary for health?—Yes, for an application to Parliament for certain parishes can seldom be carried through for less than 600*l.* or 700*l.*; persons in consequence will not agree, and the thing gets into disorder.

2591. There would be very little difficulty, on due consideration, in framing an Act for those general purposes?—I think not. I hold in my hand the proposed Act for this session for the metropolis sewerage, which I have brought with me, because it contains a good many clauses; some I like very well, and some not quite so well.

2592. Do you not think that in those crowded districts, after those powers were obtained for regulations as to building, and for cleansing, there ought to be some officer in the nature of an inspector of nuisances, or an inspector of sewers, to see to the state in which they were, and to report periodically to the local authorities?—I think it highly important there should be a competent person to see that that is carried into effect, and I should say, report to the magistrates, or to some local authorities.

2593. Do you think, in addition to that, that in those crowded districts where so many are brought together, and many of them extremely poor, and frequently with contagious disorders among them, something in the nature of a Board of Health, who might report on the sanitary state of the districts, and suggest remedies without having the power to enforce them, might be beneficial?—I should think each county or considerable district might have such a commission; if it would be too expensive to have one for each populous district, two reports in the year might answer the purpose.

2594. The Board of Health might consist of unpaid individuals, or at all events the cost of it would be little?—I think that would be very desirable. There is one point which has just struck me, which is this, that the difficulty of making sewers is the getting the money in the first instance; and as it is a permanent thing, that portion of the expense, in my opinion, ought to be spread over a number of years. We have a precedent for that in the Bayswater sewer, which was executed by Government. They issued Exchequer Bills, to be paid off in 20 years, in different instalments. And if some mode of furnishing the money to do that in the first instance, making it payable out of the rent of the houses in a course of years, were provided, almost all the towns might be drained; but that could not be done without some provision of that kind.

2595. You think such an advance by Government would give facilities, that it would be subsequently repaid, and that it would give at the same time a great advantage to the poorer classes, by improving their dwellings, and a considerable increase of employment by the works?—Yes; and it would benefit the rich as well as the poor, for they do not like to be putting their hands in their pockets too much in one year.

Thomas Ashton, Esq. called in; and Examined.

T. Ashton, Esq.

2596. *Chairman.*] WHERE do you reside?—At Hyde, near Manchester.

2597. Are you acquainted with Ashton, Staleybridge, and Duckinfield?—Yes, I live very near to them.

2598. The population of Ashton is 22,000; Staleybridge, 17,300; and Duckinfield,

infield, 18,600; is it not?—The population is rather larger, perhaps 10,000 more.

2599. Those large districts are inhabited very much by the working classes, are they not?—Yes, principally by cotton manufacturers.

2600. There is a statement in the statistical report of the neighbourhood of Manchester, of the population of the working classes, in which it is stated to be, in Manchester, 64 per cent.; in Ashton, 81 per cent.; in Staleybridge, 41 per cent.; and in Duckinfield, 44 per cent.; showing how large a proportion of those towns consists of the working classes?—I am aware of that.

2601. With respect to the construction of the dwellings of the working classes in those districts, Ashton, Staleybridge, and Duckinfield, are there many houses built in close courts?—Not so many as there are in the other towns, I think.

2602. Are there any in which the houses are built back to back?—The greatest number of them are built with two rooms, and a front door and back door, two rooms above and two below; I am not acquainted so much with the courts and alleys.

2603. In the alleys, are the fronts of the houses, in many instances, very near one another?—Generally, in Duckinfield they are very shallow.

2604. What is the state of the drainage?—In Duckinfield and Ashton, very good indeed; in Staleybridge it is principally good, but there is one old part of it rather indifferent.

2605. Do you mean that there are underground sewers?—It is built on very uneven ground, it falls away very rapidly; in some places they are very well sewered, in Ashton particularly.

2606. Are they under-ground sewers, or principally surface drains?—Principally surface drains.

2607. Have you any system, securing proper ventilation, adopted?—No; what we want through the town is, a regular system, but every one does as he pleases.

2608. Is there proper ventilation in the close courts?—I cannot state that.

2609. Is there any system of inspection?—No.

2610. There is no officer appointed, as inspector of nuisances, to see whether they are kept clean, and whether the ash-holes are emptied, and general attention is paid to the health of the humbler classes?—None whatever.

2611. Would not such a regulation be desirable?—Very desirable indeed. I apprehend, a person employed by the magistrates of Duckinfield would be the best of any persons in the place.

2612. Is there any authority with respect to the paving?—No, it is all optional, except the public roads, which are done under the Turnpike Act.

2613. In the little alleys and courts, where the smaller houses are, there is no regular system?—No.

2614. Does the same maxim apply there which does generally, that what is everybody's business is nobody's?—Just so.

2615. There are, therefore, holes and pits, probably containing refuse?—A great many of the houses are built by large manufacturers, and they make them particularly eligible, in every point of view, and very comfortable, of course.

2616. Do they take care about the paving?—Yes, altogether, always.

2617. There are others, perhaps, built by small proprietors, who try to get what they can?—Yes, that is the evil, that they do not care what is done with them; their rule is, the worse the houses, the larger the interest they will get for them.

2618. Do they derive very large interest upon their capital invested in houses?—A very large interest on the worst houses; they build them as close as they can, to get in as many as possible.

2619. There are no building regulations in respect of the space?—No.

2620. Nor any system of inspection as to cleanliness?—No.

2621. Is the supply of water good?—In most instances good, and in some, very good; there have been three Acts lately obtained for that district, and now the water is excellent.

2622. What is the state of things with regard to lodging-houses?—There are very few; in fact it is a district in which the cotton trade has been less affected than any other, and the poor-rates are low.

2623. Are there any spaces, where the people can take exercise, reserved?—None reserved for the purpose, but the towns being small the people can get out into the surrounding districts.

T. *Ashton*, Esq.

8 April 1840.

2624. As the towns spread, the evil will become greater?—Yes, the evil will become greater as the towns become larger; there are a great many houses built in one district; every separate house is built by an individual; if one is desirous to bring up a sewer, his neighbour will not do it; I have built a great deal, and have attended to the condition of the labouring classes, and I think that a general Building Act, which would promote improvement in their dwellings, would be of very great use; there is nothing which tends to assist the people so much as a good house; in the houses I have built, I never have to change my tenants.

2625. If their houses are not comfortable, they are much more likely to resort to public-houses?—Certainly.

Veneris, 15° *die Maii*, 1840.

MEMBERS PRESENT.

Mr. Baines.	Mr. W. Patten.
Mr. Brotherton.	Mr. Slaney.
Mr. Cowper.	Mr. Tufnell.
Mr. Ingham.	Mr. Walker.
Mr. Mackinnon.	

R. A. SLANEY, Esq. IN THE CHAIR.

George Smith, Esq. called in; and Examined.

George Smith, Esq.

15 May 1840.

2626. *Chairman.* YOU are an architect?—I am.

2627. Residing in the Old Jewry?—I do not reside there; my place of business is there.

2628. You have considerable knowledge and experience of the buildings in and about London, have you not?—I have had considerable practice for the last 37 years in the City.

2629. Has your practice been chiefly in the metropolis, or in other parts of the kingdom as well?—In various parts of the kingdom; I may also mention that I am a district surveyor.

2630. What district?—The south of the city of London.

2631. In what districts of the metropolis have you had experience chiefly with respect to the buildings?—Most of them.

2632. Have you had much experience in places at a distance from the metropolis?—I have been at Liverpool and Manchester.

2633. And in some of the large trading towns in England?—Yes.

2634. You said you had at Liverpool?—Yes.

2635. And Manchester?—Yes, Manchester and Bristol.

2636. The Committee have been inquiring into the state of the dwellings of the poorer classes in many of the large towns, both in the city of London and in various other towns, and they have found a great deal that they think might be corrected by some system of sewerage; and among other suggestions that have been made to them, one that they would wish to put forward is that of a Building Act, which should be applicable to the humbler classes of dwellings, for the purpose of insuring such a construction of buildings as should be beneficial to the health of the inhabitants, and generally advantageous to the community. Have you turned your attention to that subject?—Not in large towns; but in the neighbourhood of the metropolis our Building Act does not take in many places, which are now growing very populous, particularly such places as Greenwich and Camberwell and Peckham.

2637. Those populous districts you have last mentioned are beyond the precincts of the Building Act, are they?—Yes.

2638. But the Building Act itself only goes so far as to regulate party-walls, does it not?—It only goes, with respect to the construction of the building, to the formation of the external walls and the application of the timbers, but it does not do anything with respect to open spaces, or sewerage, or anything of the kind.

2639. It does not do anything with regard to the ventilation or the sewerage of the humbler class of houses?—Certainly not.

2640. Do you not think that some regulation which should insure ventilation, and such a construction of buildings as shall be found beneficial to the health of the inhabitants, would be useful?—I think it is very desirable that there should be such a regulation.

2641. Do you not think that a general Building Act, applicable at least to the humbler class of houses, which are now so fast increasing in large towns, and laying down general rules, so as to state in a plain way that which will insure sanitary regulations for the humbler classes of the community, would be necessary?—I think it would be highly desirable, particularly in such places as Manchester.

2642. Are you aware that in many districts of the metropolis there are close courts built, into which you enter through a small archway, where the houses are frequently very close to each other, densely inhabited, in which, in fact, there is no current of air which can insure that ventilation which is necessary to health?—There are many instances of the kind, and those places are generally occupied, every room of them, by a separate family, all huddled together.

2643. The Committee has had evidence from medical men to show that that form of construction is very injurious to health. Have you the smallest doubt that that is the case?—I have had an opportunity of seeing a great deal of it, especially in Saffron-hill, at the time the cholera raged; they were then in a dreadful state.

2644. Do you think that the evils they suffered were very much aggravated from the form of the construction of the dwellings?—Yes, from the form of the dwellings, and the confined state of the courts and their closeness, and in many cases a want of proper sewerage.

2645. Is it in your experience that a great deal of evil arises from there being no thoroughfare?—Yes.

2646. Not merely as preventing the current of air passing through, but also where there is a thoroughfare they appear to have been more careful of their appearance?—Yes; I can show the Committee a court in the neighbourhood of Holborn where it is horrible to go up it.

2647. Inhabited by the humbler classes, is it?—Yes, and they have no convenience, nor anything of the kind; the court is in a most filthy state.

2648. Do you know whether fevers prevail there?—I am not aware of that fact.

2649. You think, therefore, that some improvement in the construction of the houses of that class would be highly desirable, do you?—Yes.

2650. Are you aware that in the town of Liverpool, and also of Manchester, there are a vast number of cellar habitations?—I am quite aware of it

2651. Habitations in which whole families live, as it were, in subterraneous excavations?—I have particularly observed it in Manchester.

2652. Where they are upon the damp ground?—Yes; upon the bare earth.

2653. Can you have any doubt that such a construction is very injurious to the health of the people?—There can be no doubt of it.

2654. Another construction of dwellings, the Committee are told, prevails very extensively, particularly in Liverpool, which is that of close courts, in which you enter under a small archway, perhaps four feet wide, you then come into a court, perhaps nine feet wide, of considerable length, and which is built up at the end, and this court so built and the houses in it are built back to back to houses of a similar construction in an adjacent court, so as to prevent any current of air from passing through those houses?—I am not aware of the fact; but if it is so, it must be very injurious and prejudicial; but there are many instances of the kind in this metropolis.

2655. You think that whenever it does occur, either here, or in Liverpool, or elsewhere, that such a construction is highly injurious?—There is no doubt of it, in large towns.

2656. Do you think, therefore, that amongst the regulations of a Building Act, applicable to buildings inhabited by the humbler classes, there should be a regulation forbidding the construction to which the Committee have alluded, namely, houses built in close courts back to back, or in similar dwellings elsewhere, would not such a regulation be particularly advantageous?—I think it would.

George Smith, Esq.

15 May 1840.

2657. You think it would be productive of advantage to the health of the inmates?—It would; the whole difficulty would be in legislating, as to how a man should manage his ground.

2658. Do you not think that some regulation with respect to rows of houses in populous districts, inhabited by the humbler classes, should be laid down, so as to insure a certain space before and at the back of them?—I think it would be desirable they should be so regulated that every court or alley should be of a width comparative with the height of the houses on either side; and no houses should be placed back to back, because where there is no circulation of air in the houses it is prejudicial to health; we always find more sickness where there is not a thorough ventilation, because there it is always unwholesome.

2659. Such a regulation, that is to say, insuring some space proportionate to the height of the houses, would that be a rule easy of comprehension as applicable to various places and various sized houses, and not requiring very great complexity of detail?—I think it would be made very simple.

2660. What should you say would be for houses of that class a fair proportion; would you leave a margin so as to say it should be between one-half and one-third, or something of that kind?—I should think it ought to be more than one-half.

2661. What proportion do you think?—Two-thirds of the height of the front wall should be the width of the court.

2662. Do you think that some proportion, though not so great a one, might not be laid down at the back, at least as far as regards the first story?—It would not be so necessary to have a large space, because most of these small houses have lean-to's with houses at the back; supposing they are not allowed to build back to back, each would have his own yard, and therefore they would not require so much width.

2663. Perhaps a quarter or a third might be sufficient?—I should think a third, because that gives the same space as you have in the front.

2664. In the existing Building Acts, which are only of local extension, the houses are divided into different classes, are they not?—Yes, they are; there are seven rates or classes of building.

2665. Then, in the two lower, most probably will be comprised the middle of the working classes?—The fourth-rate or class of building is the dwelling of the lower class of people generally, except there are some of a higher rate where they are let out in different divisions. I was over one the other day, which was chiefly inhabited by Italians who go about with images through the streets; there was a family in every room.

2666. What are the other rates below the fourth?—They do not apply to dwelling-houses; that is the last; but it does to houses that are not in rows.

2667. From the use that has been made of former Acts, you think that there would be no difficulty at all in laying down such regulations?—None at all, as to the description.

2668. Are there any other suggestions beyond those the Committee have already spoken of with reference to building regulations, as regards the humbler classes of houses, that you would recommend?—It does not occur to me at the moment, but I was not aware of the question until I came down here.

2669. Now, with reference to there being some conveniences appended to a certain number of houses, do you not think there might be some regulation of that nature also laid down, so as it should be necessary to erect certain conveniences to any certain number of houses?—That ought to be.

2670. And that would not be difficult, would it?—There would be no difficulty at all in it.

2671. With reference also to small easements to hold the rubbish, and offal, and filth, and so forth, such would be a necessary regulation, would it not?—No doubt of it.

2672. Then with those regulations the Committee have been speaking of, and those insuring reasonable conveniences, to which the Committee have alluded, do you think it would be also necessary to have something to insure a good system of sewerage?—I think it is one of the first objects.

2673. The Committee have considered the question somewhat, and they have thought a general Sewerage Act, laying down regulations which might be put into force by various local districts, would be a valuable assistance?—No doubt of it; a very great deal has been done of late years. I hold an appointment under the

Mercers'

Mercers' Company, and they have subscribed several thousand pounds for building sewers.

2674. Does that apply to buildings that already exist?—No; there is a new town, I may say, in the Commercial-road.

2675. That is done by a single company, is it?—Some of the sewers they built wholly themselves, and, with respect to others, they contributed to the commissioners.

2676. You think that such a general Act, laying down general regulations, and giving facilities for different populous districts to embrace those regulations, would be of very great value?—It would be very valuable indeed.

2677. It would prevent the necessity of applying for an Act in each individual case, and thereby save expense?—No doubt of it.

2678. And it would prevent the towns and suburbs being put to that expense?—Certainly.

2679. Are you aware that the Commissions of Sewers for the London districts appear originally to have been formed for the purpose of taking off only the surface water?—Originally they were.

2680. Are you aware that at present none of the Commissioners of Sewers in this town have any power to oblige the inhabitants of any particular houses to join an under-ground drain from their house down to the common sewer?—I believe there is no such power.

2681. So that if the Commissioners of Sewers bring an under-ground drain between two rows of houses, they have no power to oblige the inhabitants of those houses to carry off the dirt and filth of their houses by joining a drain to that?—They have no such power, and in several instances we find the tenants will not subscribe, even after the sewer had been made, to join the drain to it.

2682. You think such a power ought to be in any new Act of Parliament?—Yes.

2683. Mr. *Cowper*.] Do you think that any compulsory enactment of that nature would tend to check speculation in buildings?—I should rather think the reverse, because it would tend to make them so much more valuable.

2684. When builders build a row of houses on a speculation, it is not usual for them to provide any means for sewerage and drainage?—Many of them do not; but I apprehend that must be of a very inferior class of houses. If a man builds a house of a better class or character, he would of necessity make sewers.

2685. What effect upon builders of the lower class of houses would a compulsory enactment of this nature have?—It would operate, perhaps, so as to make them not so anxious to expend their money in those things.

2686. *Chairman*.] Do they not now in many instances put their money into speculations of that kind, in order to draw the utmost penny they have, without any reference at all to the comfort of the inhabitants who occupy those houses?—There is no doubt of it.

2687. Do they not in many instances when they have let them take no heed whether they want drainage or sewerage, or anything of the kind?—Very frequently.

2688. Does it not appear to you, that for those general purposes of sanitary regulations with respect to health in these small dwellings, the landlord should be the person liable to make them instead of the tenant?—I think decidedly the freeholder should make the main drain; but I do not think there would be any hardship in compelling the tenant to contribute his quota, because he has all the advantage and benefit of it, with regard to health, and so on.

2689. Are you aware that the Commissioners of Sewers have no power at present to prevent the sinking of cesspools, or other receptacles for filth and wet, below the level of the common sewer?—They have no such power, I believe.

2690. Do you not think that some power of that kind, to prevent the formation of receptacles for filth, such as cesspools, which are injurious to health, below such a level as the drain can take off, will also be necessary in a Drainage Act?—No doubt; I believe several of the commissioners have no power to build new sewers, nor to tax the inhabitants; they can take down and rebuild old sewers, but they cannot make new ones.

2691. Do you not think that a power to enable them to build new sewers, commensurate with the increase of population and houses requiring such convenience, is absolutely necessary?—Certainly. The Mercers' Company have a large

George Smith, Esq.

15 May 1840.

a large property in Long Acre; I have applied to them on the subject of building a sewer, because the whole of it is without a sewer, except down Castle-street and Little St. Martin's-lane. The cross-streets from Long Acre to Castle-street have no sewerage, except the surface-drains and cesspools. I am now in communication with the Commissioners of Sewers for the purpose of the formation of drains.

2692. It appears to you, generally, from your experience, that with respect to the present buildings, in the first place, there is no general Building Act applicable to the great populous towns in the kingdom?—No doubt; they have some local Acts, but there is no general Building Act. The city of London has an Act of its own.

2693. The Building Acts as they exist at present do not go to the construction of the dwellings, nor have they any sanitary regulations?—No.

2694. And you think it would be of advantage to the whole kingdom, do you?—Yes, with respect to the large towns.

2695. And with respect also to Sewerage Acts, it appears, that even though there are Commissioners of Sewers, yet they are very deficient in power, and therefore you think a general Sewerage Act, giving additional power and facilities, as applicable to all large towns, would also be highly advantageous?—I do.

2696. With respect to a general Building Act you spoke of as applicable to the city of London, can you give the Committee the title of it?—It is an Act passed in the 18th year of the reign of King Geo. 3, c. 14, for the better regulation of buildings, and the preservation of them against accidents by fire.

2697. Is there any other Building Act besides that?—None that I am aware of.

2698. That Act was only applicable and intended to prevent accidents by fire, and did not contain any regulation applicable to the insuring the health of the inhabitants?—It did not.

2699. Is that Act applicable only to the metropolis?—And the suburbs.

2700. It is not an Act applicable beyond the metropolis, is it?—No; it does not even take in Deptford, although it takes in Rotherhithe.

2701. Are you aware of any local Act in which there are provisions referable to the subject-matter the Committee are now inquiring into?—None that I have ever heard of.

2702. Do you not think that from the vast increase of these populous communities, and the more close congregation of the humbler classes together, that some such building regulations are actually requisite?—I think it would be highly desirable.

2703. And as you consider that the present neglect is the cause of many instances of disease and illness amongst the poorer classes, can you have any doubt that a better construction of dwellings would improve their health, and would also lessen the poor rates?—I should think it would tend to that.

2704. And thereby be a saving?—I should think it would.

2705. Mr. *Tufnell.*] You have been very extensively engaged in building, have you not?—Yes.

2706. Are the buildings you have been engaged in of a superior order?—Under my direction, I have built about 2,000 of the class of houses the Committee have been speaking of, but I have always taken care to have wide streets and sewerage.

2707. As far as your experience goes, is more or less attention paid than there was formerly to the drainage?—I find my houses always filled with tenants in consequence of the goodness of the drainage, while the houses in the narrow courts and places are becoming depopulated.

2708. Is that in any particular district?—The Commercial-road; I have let nearly 60 acres within the last 14 or 15 years, which are now covered with buildings.

2709. Then you consider that additional drainage is a considerable improvement?—It is a great recommendation to the houses.

2710. Do you make the drainage yourself?—In some cases they have been made by the Commissioners, in other cases we have made them ourselves; I never allow anything in the rear of the houses to be higher than six feet.

2711. Have you found any objection from the Commissioners of Sewers to make the drainage you required?—Yes.

2712. Upon

2712. Upon what grounds have they objected?—They have objected from want of funds in some instances, and in others the want of power.

2713. What districts would that be in?—St. George's-in-the-East and the Tower Hamlets. In Westminster they complain they have not power to make them. In the Tower Hamlets they have made new sewers; but in the Westminster division they say they have no power to make new sewers; they may rebuild an old sewer, but they may not make new ones.

2714. Mr. *Mackinnon.*] Suppose instead of the various Acts with respect to sewers which have taken place at various times within the last half century; supposing instead of that, there had been one general Sewers Act passed half a century ago, do you consider that that would have been better for the metropolis than the present mode?—It is difficult to say.

2715. Mr. *Tufnell.*] Do you conceive that any difficulty arises from having different commissioners of sewers in the same metropolis, or do you consider it better to have a central power?—I am inclined to think a local district with different commissioners is better than one central, because I should think they would be better acquainted with all its localities and advantages.

2716. Of course if you had a central power you must have local commissioners, in order that they may have the knowledge?—The Committee is alluding to a superior body over those.

2717. Formed of the members of the local commissions?—I think that would be an improvement; but there is sometimes a difficulty with two districts, because they clash together.

2718. With regard to the levels, do you mean?—Yes.

2719. There is a different level in each district, is there?—Yes, and other difficulties; the districts run a good deal one into the other; they cannot do it because the other powers would interefere with them; there has been some difficulty in the neighbourhood of Lincoln's-Inn Fields about that.

2720. Mr. *Mackinnon.*] Supposing there had been one superintendence in the beginning, would there not have been a great deal of money saved, and the town better drained, because you would have had all the branch sewers running into one?—They might have adhered to one general system, which would have been better; but the first outlay would have been larger, although there would have been a saving in the end.

2721. Mr. *Tufnell.*] Do you conceive, even now, if the system were changed, and there were these local districts forming a central board, do you consider it would be difficult to lay down one general rule as to expense, so as to improve the system?—I think there is no doubt of it.

2722. Mr. *Ingham.*] The part you have been speaking of is north of the Commercial-road, is it not?—It is south as well as north.

2723. On either side of the Commercial-road?—Yes; but the larger proportion is on the north.

2724. You said you found your houses were always filled, while houses differently situated were empty; what class of persons are they occupying these houses?—I have a great many seafaring men; the better class of houses are occupied by the mates of vessels; and there are a great many clerks in public offices.

2725. What rent do they pay?—From 14 *l.* to 16 *l.* and 18 *l.* a year.

2726. Are any of those houses let out in single rooms and inhabited by the common street labourers or dock labourers?—Not of that class, certainly; they may let a floor.

2727. And then they would have to pay as much as 7 *l.* a year for it?—They would have to pay more, because the person occupying the house would make them pay a much larger proportion; I have very frequently found them paying 3 *s.*, 4 *s.*, and 5 *s.* a week.

2728. You are aware of the rate of wages you are paying yourself to mason's labourers, and that class of persons; would they be able to pay so much rent?—Indeed, some of the lower class of the Irish (a great many in the neighbourhood of Saffron-hill) are paying 1 *s.* 6 *d.* for a cellar; and a back garret they let out at perhaps 1 *s.*, and a front garret at 1 *s.* 6 *d.*

2729. Do you think a landlord could afford to make the improvements such

George Smith, Esq.

15 May 1840.

as have been made in the buildings which have been effected by the Mercers' Company, if they only got such a rent as an ordinary working man could pay?—Yes, I think so.

2730. The houses that are now inhabited by the poorer classes have got no sewers at all, have they?—Very few of them have.

2731. The people that are the holders of the houses, do they seem to be accumulating large gains from their investment?—I see they are making large gains in that particular neighbourhood; they are a sort of middle-men, living on these poorer people, and they could very well afford to make these conveniences, because it is dean and chapter property, and they have it at a small fine only.

2732. *Chairman.*] Is the rent paid weekly?—Yes; they always go on the Monday morning for it.

2733. Do you not think there ought to be also in either a Building or Sewerage Act some general regulations for the purpose of enforcing paving and cleansing in populous districts inhabited by the class to which the Committee have been referring?—I think there is an Act for that.

2734. Is that a general Act?—No, a local Act.

2735. Do you not think that a general Act applicable to other populous places similarly situated, enforcing a good system of paving and cleansing, would be desirable?—I think it would be very desirable.

2736. You are aware that the cleansing, that is the scavenger's work, and so forth, is very greatly neglected in districts inhabited by the poorer classes in many cases?—Very much.

2737. And does not their health suffer in consequence?—No doubt of it.

2738. And you think some regulation for the purpose of enforcing that would be necessary and right?—I think it would tend very much to the benefit of the health of the people.

2739. Do you not think that some plan for the purpose of having a local inspector, either chosen by the inhabitants, or in some other way, for the purpose of seeing that the districts of these neighbourhoods are properly cleansed, would be very useful?—Yes, it would.

2740. According to the common saying of what is everybody's business is no one's, therefore it is at present in various places very much neglected?—It is very much so; the scavengers do it by contract, and there is no one to look over them.

2741. Are you aware that in many of the provincial towns, such as Liverpool and elsewhere, there is no such thing as any scavengering taking place in these close courts?—I am not aware of it.

2742. Do you not think that in some way, in these populous districts, the appointment of a board of health, that is to say, a number of persons of respectable character and competent ability as a board of health, to see to the health of the inhabitants, and to whom the inspector might report anything injurious to health, would be useful?—I think it would be highly desirable that some regulation should take place to preserve the health of the inhabitants of these close districts.

2743. And the principle of such a regulation would be advantageous as referable to other large towns containing large communities?—In the same proportion.

2744. Mr. *Tufnell.*] Do you conceive, without interfering too much with private speculation, it would be possible to introduce some enactment with regard to houses of an inferior description?—I think there would be some difficulty where small houses only are built, if they were to be called upon to pay for the main sewer.

2745. You say you think some regulation with regard to the construction of these houses would be necessary; in what particular point would you have that regulation?—The court or alley should bear a certain proportion in width to the height.

2746. It is only with regard to the space between the houses?—Yes.

Lunæ, 18° *die Maii*, 1840.

MEMBERS PRESENT.

Mr. Baines.	Mr. Slaney.
Mr. Greene.	Lord James Stuart.
Mr. Ingham.	Mr. Tufnell.
Mr. Mackinnon.	Mr. Vigors.

R. A. SLANEY, Esq. IN THE CHAIR.

George Samuel Jenks, M. D. called in; and Examined.

G. S. Jenks, M. D.
18 May 1840.

2747. *Chairman.*] YOU are resident at Brighton?—I am.

2748. Have you turned your attention to the subject upon which the Committee is inquiring with respect to the condition of large towns referable to sanitary provisions for the benefit of the inhabitants?—I have; I have been employed lately in drawing up a Sanitary Report for the Poor Law Commissioners, to be laid before the House of Lords.

2749. With reference to what town was that?—Brighton.

2750. What is the population of Brighton?—It is about 40,360.

2751. It has very rapidly increased in population within the last 20 years?—It has.

2752. Are there a considerable number of the poorer and working classes resident in Brighton?—There are a considerable number.

2753. Are the localities in which they reside for the most part crowded, or are they tolerably open?—Some parts are very open and very well arranged, others very close, very densely populated, and in streets, alleys, and courts terminating in a cul-de-sac.

2754. Are there a considerable portion of the population who inhabit close courts through which there is no thoroughfare for the air?—A great many, chiefly fishermen.

2755. Built up on the sides and at the ends?—Yes.

2756. Are the ends of those under arches or open at the top?—Very often under arches, but some are open; these are in the very oldest part of the town.

2757. Is there any form of building in Brighton which you consider inimical to the health of the inhabitants, either in the form of cellar-dwellings or buildings in which the houses are back to back, so as to prevent the air passing through?—There are very few houses which have cellars, in which the people live, under ground; there are a few streets, but very few, in which there are some built back to back; those are by no means healthy.

2758. Do you refer to rows of houses?—Yes, rows of houses run up at the back of others, some at the back of the privies, and others with surface gutters, in which there is a great quantity of filth.

2759. Is not the form of building houses back to back, which prevents a current of air passing through them, very injurious to health?—It is.

2760. Supposing a fever from any other cause to be generated in houses of that description, is it not more likely to continue in consequence of the want of a current of air?—It is decidedly so; but we have very little fever at Brighton. That form of building undoubtedly would be the worst possible in the event of fever.

2761. Are those houses chiefly modern or of old construction?—Those I now allude to are of a construction within these 30 years.

2762. What is the state of the sewerage and cleansing in the districts with which you are acquainted?—That in the parts I am now speaking of is decidedly bad.

2763. Is there a want of under-ground drainage?—There is, and there are too many cesspools.

2764. Instead of an under-ground drainage there is a mere surface drainage?—There is.

G. S. Jenks, M. D.

18 May 1840.

2765. Is that impeded in the courts and alleys by filth, attended with an unpleasant odour?—Yes.

2766-7. Is that state of things injurious to the health of the inhabitants?—Yes, but not to the extent of producing fevers.

2768. With respect to the cesspools, are they below the level of the sewers?—In most parts there is no under-drainage; therefore the refuse matter is collected in cesspools.

2769. Is such matter highly injurious?—Very injurious; because the cesspools are often under buildings, and very often near to wells, which they should not be, and frequently they are filled to overflowing, and left so.

2770. Is there any system of inspection of those close courts?—There is no system of inspection which I am aware of; I should think not, from the state in which I find them.

2771. Are they much neglected?—They are. On applying to the clerk of the commissioners (for the town of Brighton is governed by commissioners) he informed me they had no authority to interfere, unless a memorial was placed before the commissioners complaining of a public nuisance.

2772. Do you know whether the commissioners have power to make new under-ground drains, and whether, when they have made such under-ground drains, they have the power of enforcing a communication from the houses to the drains?—I know they have the power of making under-ground drains; but I do not know whether they have the power of enforcing communication.

2773. Do you know whether they have the power of preventing cesspools being dug to a level lower than the drains?—I do not think they have.

2774. Some improvements in the way of power given to the commissioners of sewers would be useful?—I think so, decidedly.

2775. And also a system of inspection, to see that it was well carried out, and that the cleansing of those courts and places were better attended to?—Yes; they have an authority for cleansing the courts and places; but there is not a good office of scavengers there. The great streets and thoroughfares are all sufficiently attended to; but it is in those places where the greatest attention is required that the least is paid.

2776. Have you attended generally to the subject referable to such sanitary regulations as may be beneficial to the health of the poorer classes in large and densely peopled towns and districts?—I have.

2777. Have the goodness to state what you think should be the general regulations upon these subjects?—The general regulations should be with regard to thorough ventilation; a good supply of water, of good quality, together with all the means of carrying off the water which has been used, and sufficient drainage; and a surface drainage is a very necessary thing. With regard to buildings; that the streets should be of sufficient width, and well paved, and that there should be no back buildings to intercept the thorough ventilation of air in any direction; that they should not be built back to back; that the houses should be built of proper materials, to keep them water-tight; that a great attention should be paid to their site as well as their exposure and their elevation; and that there should be no under-ground dwellings. The attention to drainage is most essential.

2778. Have you seen many districts in which that has been neglected?—I have seen many districts in which that has been very much neglected.

2779. Are you aware that there being no general Drainage Act, it is necessary to have a separate Act for the draining of each particular place, which is obtained at a great expense?—I should conceive it very desirable that it should be embodied in one Act. I think it is necessary and very desirable in all towns that there should be open spaces, public walks and promenades for the people, and that there should be public baths for the people, and that facilities should be afforded them, where opportunities present themselves, to bathe in rivers or in the sea.

2780. Some reserved place on the banks of an adjacent river where they can dress and undress?—Yes; and that every other means which can be devised for the out-door recreation and exercise of the poor is very desirable.

2781. Are there many schools for the poorer classes in Brighton?—There are.

2782. Are there any playgrounds appendant to those schools in which the children can take exercise?—In general there are.

2783. Do you not think such an appendage is highly advantageous to young children?—Highly advantageous.

2784. Do you not think that it is desirable to assist their physical developement as well as to increase their cheerfulness?—Certainly.

2785. Is it not more important in respect of those children who inhabit densely populated districts?—Certainly.

2786. Mr. *Mackinnon.*] Have you turned your attention to the prejudice to health arising from burying in towns?—Yes; that does not apply to Brighton; but I have seen a good deal of it abroad.

2787. What is the result of your observations upon that subject, not with reference to Brighton, but generally?—My opinion generally is that it is prejudicial to the health of towns having burial-grounds in the central parts, where the inhabitants are closely pent up; that in the large towns on the Continent where this has happened great evil has arisen from it. Gentlemen in this Committee are probably aware of the serious accidents which have occurred in Paris at different times, which at last compelled the Government to forbid any more bodies being buried in the towns; the same prohibition exists, I am told, in Austria and in Prussia.

2788. Was there not an ordinance of Napoleon, containing a general order throughout France that cemeteries should not be within a mile of the bills of mortality?—Yes; at Naples they are not allowed within two miles.

2789. Do you consider that it would be advisable to make such a regulation in this country?—I think certainly that no burial-ground should be within a mile or a mile and a half of a town. The site of a burial-ground, however, is of great importance. With regard to the choice of the spot, it ought to be a place perfectly dry, not near to springs or rivers; it should be thoroughly exposed to the wind, care being taken not to suffer the exhalations to pass over places which are inhabited; for though burying bodies may retard putrefaction, it does not stop it, and in warm days, exhalations from the best regulated burying-grounds are unpleasant and injurious to health.

2790. Are you aware that in the regulations on that subject in the Code Napoleon there was a direction that burying-grounds should be permitted only on the north side of the town, from the idea that when the north wind blew it was the most drying wind, and therefore the less likely to injure the inhabitants?—It was strongly recommended in a memoir drawn up by a committee, that they should be exposed to the easterly and northerly winds, because they were dry winds. The same committee also recommended that no excavations should be made, except in particular seasons of the year, for example, in the winter and early spring, when those dry winds prevail, on account of the risk from opening the ground.

2791. *Chairman.*] Without entering particularly into the subject, you think that due sanitary regulations, with regard to the provision of burying-grounds, ought to be enforced by legislative authority?—Certainly, that is decidedly my opinion.

2792. Mr. *Greene.*] Having spoken of the practice on the Continent with regard to the burying-grounds, what is your opinion with respect to providing abbatoirs out of the towns, and preventing slaughtering in the towns?—That is one of the last improvements on the Continent. In Rome, where formerly the slaughter-houses were a great nuisance, now all the animals are slaughtered outside the town; a large abbatoir has been built within the last 10 or 12 years, and an excellent establishment it is, provided with abundance of water and every other convenience, and kept in the best possible state of cleanliness.

2793. Do you not conceive such establishments very much promote the health of towns?—I have no doubt they do, for I think slaughter-houses in a town, particularly if it is densely populated, constantly give out bad and putrefying exhalations. During the war, in the city of Cork, where enormous quantities of cattle were slaughtered for the use of the fleet, there is no doubt fever prevailed in the districts were those slaughter-houses were situate.

Veneris, 22° *die Maii*, 1840.

MEMBERS PRESENT.

Mr. Baines.	Mr. R. A. Slaney.
Mr. Brotherton.	Lord James Stuart.
Mr. Cowper.	Mr. Tufnell.
Mr. Greene.	Mr. Vigors.
Mr. Mackinnon.	

R. A. SLANEY, Esq. IN THE CHAIR.

James Pennethorne, Esq. called in; and Examined.

J. Pennethorne, Esq.

22 May 1840.

2794. *Chairman.*] YOU have been professionally engaged in surveying buildings for some years past?—Yes, I have been engaged in various improvements of the metropolis, under the Commissioners of Woods and Forests.

2795. Are you acquainted with the construction of buildings throughout most parts of the metropolis?—Yes, I think in all parts.

2796. Are you acquainted with the buildings, particularly that are inhabited by the humbler working classes, in various parts of the capital of London, and the suburbs?—Yes; I have had occasion, within the last three months, to survey the whole of St. Giles's, and the worst parts of Essex-street, Spitalfields, and the parts north of Farringdon-street, round Field-lane and Saffron-hill, which are, I believe, almost the worst, if not quite, in London.

2797. Will you describe the state of the buildings, particularly with respect to their forms, in those districts?—Those districts are composed almost entirely of small courts, very small and very narrow, the access to them being only under gateways; in many cases they have been larger courts originally, and afterwards built in again with houses back to back, without any outlet behind, and only consisting of two rooms, and almost a ladder for a staircase; and those houses are occupied by an immense number of inhabitants. I have seen three and four beds, and more than that, in each room; they are all as dark as possible of course, and as filthy as it is possible for any places to be, arising from want of air and light.

2798. Are those places extremely close and badly ventilated?—Yes.

2799. The entrance, you say, is under an archway?—Yes.

2800. The court has no thoroughfare through it?—In many instances, and in some instances there are thoroughfares through them.

2801. Many of the courts are so built that there is no thorough draught for the air?—Yes.

2802. Does not that form of construction appear to you very injurious to the health of the inhabitants?—I have no doubt it is extremely injurious.

2803. Are the front walls of those houses close to each other, or is there a good space between them?—In many cases less than 10 feet; they will not, in any instance, I believe, be found 20 feet apart, not even in the wide part of a court; but generally they will average 10 feet, and in some instances be as little as five.

2804. Is that sufficient for the purposes of due ventilation, and cleanliness, and air?—No; no houses ought to be allowed to be built less than 20 feet apart from front to front.

2805. The entrances, you say, are under archways, there is no thorough draught of air, and the houses are built very close to each other in front; are they not, in many instances, also built back to back, so as to have no means of giving a circulation of air through them?—Yes.

2806. So that in addition to their being in courts with archways, they are also constructed so that no air can pass through them?—There is no thorough draught through the houses.

2807. Do not you think it is difficult to conceive any construction or form of a house which can be more injurious to health than those so situated?—I believe it is the very worst possible construction.

2808. Do you speak only of singular instances, or of numerous instances, throughout parts of London densely inhabited by the poorer population?—That is a common description of building in those districts.

2809. In those districts where the houses are so constructed, what is the nature of the under-ground drainage generally?—There is no under-ground drainage of any sort or kind to many of the districts; not to the St. Giles's and to the Spitalfield's districts; and the drainage to that north of Farringdon-street is by an open ditch, which is quite as bad as no drain, if not worse.

2810. The only mode by which the dirty water and other refuse liquids from those houses escape is by means of surface drains, or surface gutters, which are open to the air?—Yes; and in Rose-lane, which is a great deal better than the courts I have described, and which is, perhaps, one of the best streets about that part of Spitalfields, I have seen the place completely flooded with blood from the slaughter-house.

2811. Those open gutters being the only mode by which such refuse can escape, are they not constantly choked up with refuse, and filth, and various substances thrown out from the houses, ashes and so forth, so as to impede the quick passage away of those refuse liquids?—That is probably frequently the case.

2812. Is there any regular inspection of those close courts, in order to have a good system of cleansing and of scavenging applicable to them?—I do not think there is any system of the kind; certainly there is no appearance of it from the state of the districts.

2813. Is it, as far as your observation goes, quite ineffectual at present?—If there is any, it is quite ineffectual; and in some of the better parts again, where the houses have small back-yards, they were in such a filthy and dirty state, that we positively could not walk out in them.

2814. Have you in your visits to those miserable places frequently perceived the effects of bad air and fetid exhalations from those places?—Bad smells of all kinds.

2815. Have you found that there were cesspools in any of those places?—I take it there must be cesspools, because there are privies.

2816. In what state are the privies and places in which they cast the refuse in those districts; are they neglected and filthy, or otherwise?—They are places one can hardly call privies; in many cases they are only a few boards tacked together, and sometimes we could not find where the privy was, and doubted whether there was such a thing in all the court, and generally we found only one appropriated to each court.

2817. Was there any system of cleansing and keeping them in order, or were they generally filthy;—There was none; the inhabitants appeared to be living in such a state of dirt and filth, they thought of nothing in the shape of cleanliness.

2818. Were those places themselves in fact dirty and neglected?—Very bad indeed.

2819. You speak now not of particular places, but of wide-spread districts?—I speak of the districts I have named.

2820. They are inhabited by a dense population, chiefly of the working classes?—Yes; St. Giles's mostly by Irish labourers; and other districts appeared to be of the working classes, but I should think they get their living as they can; they must be of the very poorest classes; they appeared to be worse than the working classes.

2821. Do you know of fevers or contagious disorders existing in those particular districts, or have you in the course of your inquiry found out such to be the case?—I do not know that of my own knowledge.

2822. Are there a great number of children in those districts?—Yes; I saw a great many of the children almost naked, and very filthy and dirty, playing in the courts.

2823. Such a state of things must be highly injurious to the health of the inhabitants?—It must be highly injurious to the health of the inhabitants.

J. Pennethorne, Esq.

22 May 1840.

2824. The Committee have had very many cases stated to them of a similar form of construction of the houses in close courts, without any effectual drainage, built back to back, and without thoroughfares, in the town of Liverpool and some other districts; therefore the remedies which would be applicable to those you speak of would also be applicable generally, would they not?—I should imagine they would.

2825. Are you not aware that in some of the densely populated districts, where there are courts in the form you speak of, that is, without any thoroughfare, it has frequently been the case that on the small space which still remained a house has been built, as a sort of excrescence, taking away a part of the small space which remained?—That has been the case very much in St. Giles's; they have been building there within this last twelvemonth under such circumstances.

2826. Is there anything to prevent that?—I am not aware of anything.

2827. There is a Building Act applicable to London?—There is.

2828. The chief provisions of that Act are, that there shall be party-walls of a certain thickness, to prevent fires, and there are some rules to prevent overhanging buildings?—Yes, and encroachments on the pavement.

2829. Are there any regulations forbidding certain forms of buildings, which are found by experience to be injurious to the health of the inhabitants; or any rules to prevent houses being built back to back, or anything of that kind?—No, nothing of that kind.

2830. Are you aware of any building Act comprising such sanitary regulations in other places?—I am not aware of any.

2831. Do you not think, from the vast increase of the population, and the experience you have had of the evils arising from the bad form and construction of the dwellings of the poorer classes, that it would be highly desirable to have a general Building Act that should lay down general regulations to prevent such forms of construction as are found to be highly injurious?—Yes, that would be very beneficial indeed; and not only to do that, but to regulate the width of the streets; anything which would regulate those buildings so as to prevent the great masses of poor houses being congregated together as they are now would be beneficial.

2832. In such a Building Act the object would be to avoid all interference with private property not applicable to the object in view?—It would be, of course, an object for the framers of the Bill to prevent the clauses interfering more than was necessary with private property.

2833. Do you not think that for the preservation of the health of the great masses of the community, some rules ought to be laid down which could not be contravened?—I think it very desirable, and that they could be framed so as not to be injurious to private property.

2834. Under the present Building Act houses are divided into certain rates of building?—Yes.

2835. The question has reference to houses of the smaller rate, inhabited by the lower classes; as referable to them, do you think the rules proposed would be advantageous, and that they might be carried into effect, first, that wherever houses are built in close courts there should be a thoroughfare for the air?—There would be no objection to that.

2836. That is to say, that the space for a house should be left vacant at the end, so as to let the air pass through?—I think that would be of very great advantage in practice.

2837. Do you not also think that the form of building back to back in such localities ought to be forbidden?—I think they should be prevented being built back to back; I would not allow any houses to be built nearer than 10 feet to each other at back.

2838. Do you not think that cellar dwellings below the level of the underground sewer ought also to be forbidden?—Yes, decidedly, if used as habitations.

2839. You think that where cellar dwellings are at all permitted there should at all times be a drainage below the level of the floors, so as to insure their being dry?—Yes.

2840. Do you not think that, as applicable to rows of houses of this class, there ought to be some regulation with respect to the space in front and at back?—Yes.

2841. Do you not think that such regulation as to the space in front should be proportioned in some measure to the heights of the houses?—Certainly.

2842. And that that at the back should also have some reference to that circumstance?—Yes, I think it should.

2843. Opinions may differ with respect to what that proportion should be, but what proportion of height do you, as an experienced architect, think ought to be observed in the front?—Of course it is very difficult to give a proportion without consideration, but I have already said that no street or court should be less than 20 feet wide, and I think no dwelling-house should be allowed to be erected of greater height than the width of the street.

2844. That is to say, that the space in front should be the height of the building?—Yes.

2845. The Committee have had evidence from experienced men that two-thirds was sufficient, but you think it should be equal?—Yes; suppose you have houses 21 feet high, and allow two-thirds, then the street will be but 14 feet wide, which will be too narrow, and most of the small houses are within that height.

2846. What do you think it ought to be at the back?—I hardly know; but I should say not less than 10 feet in any court from back to back: there may be some cases of corner houses where the rule is not applicable; but I think every house should be built with a back yard of at least one-fourth its own size.

2847. You think some regulations of that nature are necessary, for the protection of the health of the poorer classes?—Yes.

2848. In a Building Act this matter would be considered with great care, as referable to the different districts; but you think there should be a space both at the front and at the back?—Yes; and I think that would be very easily accomplished.

2849. With reference to the humbler dwellings situated in the district spoken of, do you not think there should be some regulations as to those conveniences necessary for health being attended to?—Yes; I think every house should be provided with a privy, taking care that it is light and well ventilated.

2850. Do you not think, also, that there should be some receptacle for ashes and dirt, and so forth, so constructed as to prevent the evils arising from the present neglect?—Yes; but perhaps not to every house; one place might be common to the court.

2851. Do you not think that there ought to be a provision in the Building Act, or the Sewers Act, requiring some system of paving the courts and alleys, so as to prevent stagnant water and filth remaining in close courts?—It would be a great advantage; but there might be difficulties attending that; it would be throwing expenses perhaps upon the parishes: a general regulation to preserve the paving, of course would be a very good thing.

2852. Mr. *Cowper*.] Is the paving kept quite distinct from other matters?—Yes; there are paving commissioners, who pave the streets and take the rates.

2853. Are there any other points referable to suggestions for a Building Act applicable to this scale of houses which you would think necessary, in order to protect the inhabitants from the present defects?—No; with regard to buildings no others strike me at the moment.

2854. You think that these, if duly enforced, would be at all events a very great improvement to the health and comfort of the vast masses of the community residing in those districts?—I think they would be, and I think there ought to be, if possible, power to prevent an estate being laid out in great masses of small houses.

2855. You have spoken of the inefficient or imperfect state of the drainage in many of those districts; are you aware of the powers of the commissioners of sewers?—In some measure.

2856. Do not you think that a general Drainage Act, which should be applicable to populous districts, suburbs of towns, and so on, which should lay down general regulations, which might be enforced by the rate-payers choosing so many trustees, and going through certain forms to give facilities for drainage, would be very valuable?—Certainly; because I consider drainage much more important than any other regulations for the preservation of health.

2857. Do you not think a good system of under-ground drainage is essential to the health of any district, however well it may be built?—Decidedly.

2858. Are you not aware, that under the present powers of the commissioners, even though there are Sewers Acts, they have no power to compel the inhabi-

J. Pennethorne, Esq.

22 May 1840.

tants of any houses to make a communication from their houses to the common sewer, even when it comes close to them?—They cannot compel them to use the sewer, which they ought to have the power of doing.

2859. Ought they not also to have the power to prevent cesspools or other receptacles for liquid filth being sunk below the level of the common sewer?—Certainly.

2860. They have no such power as that at present?—They have not.

2861. Ought there not also to be some power given them to enable them to make new common sewers up to houses or fresh buildings which may arise round about them in their district?—I think they not only ought to have the power, but to be compelled to do it.

2862. You are aware that the commissioners conceive they have not the power at present?—I know some commissions have no power to build new sewers, only a power to repair those in existence.

2863. That is not the case with respect to all of them; but a declaratory or enabling Act is necessary with reference to many?—In the instances I have been speaking about, they stated to me that they had no power to make new sewers.

2863*. There are three points in which even the present commissioners of sewers wherever they are acting require additional powers; one to make new sewers; a second when the sewers are made to enforce a communication from the houses to the sewers, and a third to prevent cesspools and other receptacles for filth being sunk below the level of the sewers?—Yes, and not only to compel them to empty into the sewers, but to have proper traps on the drains to their houses, or they may become themselves nuisances.

2864. Do you not think there should be a power to enable the commissioners of sewers to cover up any open drain, which is a power which they conceive they have not at present?—If they have not that power I think they ought to have it.

2865. You are aware that though there are populous communities spreading themselves around certain districts they have no power to do those things, and must apply in each case for an Act of Parliament, which cost them from 300 *l.* to 500 *l.*, even if not opposed; do you not think that a general Act giving certain powers would be beneficial?—I should think it would; there may be technical difficulties which might prevent its being so that I am not aware of.

2866. Do you see any objection to an Act with general powers?—No, I do not. There may be this objection, that on large estates a man may choose to drain his own estate entirely; he might desire to preserve the power of doing that, without reference to any public body. In such an estate as that of the Marquess of Westminster, near the water side, if he chooses to cleanse his whole estate and take the rates, I do not think that he ought to be compelled to resort to any public body.

2867. So long as it is shown that is well done?—Certainly.

2868. Do you not think that for the sake of the health of the poor it is necessary there should be some system of inspection, to see that those things are well performed?—Yes, and to enforce cleanliness, particularly in the whitewashing and painting of the houses.

2869. With respect to the cleansing of courts, the cleaning of cesspools, the removal of filth, the stoppage of sewers or of drains, the prevention of such buildings as will impede the transmission of the air; for all these purposes do you think there should be some person who should be an inspector, and should have power to give notices to persons who are injuring the health of the inhabitants from any of those causes, and who should report to some superior power?—Yes, I think that would be one of the most useful clauses in the Bill.

2870. Do you think it is necessary, looking to the present state of things?—Yes, quite necessary; generally speaking, the medical man employed by the Poor Law Commissioners, or some other person, might report to some competent authority.

2871. Do you think it would be advisable to have appointed, by either the Poor Law Guardians or the rate-payers, or some competent authority, persons as a board of health, resident in those very populous districts, who might make such suggestions from time to time as might be requisite, and to whom the inspectors might report?—It would be a very desirable thing to have a body of men to enforce the provisions of the Bill; but I am not competent to say whether it should be a board of health or the parish authorities, or who it should be; there should be somebody to have the power to enforce the clauses of the Bill, and also officers appointed,

appointed, who would report to them. If the Bill is made sufficiently strong to answer all the purposes referred to, I think almost anybody would be competent to carry it into effect. I should think the medical man appointed by the Poor Law Commissioners is a very fit man to report on cleanliness.

2872. Do you think that the medical man appointed by the Poor Law Guardians, with perhaps two or three respectable inhabitants of the district, chosen by the parish, would be sufficient to act as a board of health?—I should imagine so.

2873. Do you not think that a good supply of water is one of the first requisites for the health of the poorer classes of the inhabitants of those districts?—Certainly, a supply of water is of great importance; it should not be supplied perhaps to each house individually, for the rates would be too heavy, but there should be some system of supplying water to the courts generally.

2874. Is not the supply of water, independent of its necessity in point of health to the inhabitants, also absolutely necessary for the purpose of cleansing, where there is a system of under-ground sewerage, so that there may be a considerable passage of water through the drains and sewers to keep them clean?—Yes; but I do not think the water supplied in that way would have much effect upon the sewers; they are cleansed more by the rain than by the water from other sources.

2875. In those populous districts where you have been, are there any schools where the children of the poorer classes attend?—Not within the districts themselves, but immediately around them, there are schools.

2876. Were the schools you have visited well ventilated?—Yes, I think so, in the schools lately built; but they have great difficulty in getting the children to attend them in those miserable districts.

2877. Have you visited any of the dame or day schools in those districts?—No, nor did I hear of any.

2878. Do you know whether there are any play-grounds to which the children can have access in the neighbourhood of those schools?—In the national schools there are, for infants, and sometimes for girls.

2879. You think there would be no difficulty in carrying into effect the general regulations referred to in a Building Act and a Sewers Act, and that such are absolutely necessary to the health of the inhabitants of those populous districts?—Yes.

2880. Are there any other matters which you feel to be applicable to the subject before the Committee?—There are some matters very injurious to health, such as poisonous manufactures and slaughter-houses, the boiling of bones, and so on, which I believe may be put down by law now, but at a great expense. I think regulations allowing a more easy mode of getting rid of those nuisances would be highly advantageous. (*The Witness produced a plan.*) This is a plan of the Rookery in St. Giles's, which exemplifies that I have stated; it is divided into little courts, through very few of which there is a thoroughfare of air. The white indicates the open spaces. The houses were originally built all round those squares, with open spaces in the centre; but from time to time they have been built within, and so divided into the numerous little courts, and houses have been so built within 12 months since.

2881. There appear to be several courts entirely built round, into which there are nothing but narrow openings?—Yes, about three feet wide and six or seven high.

2882. And in many instances the houses appear to be built back to back?—Yes.

2883. Is this same injurious mode of construction followed in other districts?—Yes. This is a plan (*producing it*) showing the courts between Whitechapel and Wentworth-street; the only entrance is by covered archways, opening into a very narrow street, which has no entrance again, except through an archway at one end, and there is a very narrow dark alley at the other end, not above seven feet six high. This is all inhabited by the humbler classes. It tends not only to the destruction of health, but quite as much to the destruction of morals; and it is quite certain, that as long as those districts remain in London and other towns, the formation of schools will be of no use. I am told on good authority, by a man whose property overlooks the courts, that frequently, on a Sunday morning, he sees a dozen women perfectly naked, without the least dress at all, dancing to a fiddler.

2884. Have you visited those districts?—I have.

2885. Are

J. Pennethorne, Esq.
22 May 1840.

2885. Are you of opinion, from what you saw of the habits of the children, that any good effect arising from education in the schools in the day must be very much neutralized by their habits of filth and misery?—I am quite convinced that very little good will be done to the children by education, and very little good to the population by prison discipline, as long as those scenes exist. I am told that there are as many as 18,000 persons let loose from the prisons in London every year; the moment they leave the prison they come back to those places, make their parties, and go into the country upon their beats.

2886. Are there a great number of children in those districts?—Yes, they are very populous; each house is inhabited by a great many families.

2887. Mr. *Cowper.*] Are the children under education in those districts?—I am afraid there is very little education among the inhabitants of those miserable districts; the property is owned by one person, who lets out to another, and he again to another weekly, who underlets daily and nightly.

2888. *Chairman.*] Do you not think it would be advisable that the small rents for water and poor's rate, and so on, should be rather borne by the landlords than squeezed out of each of the tenants?—All the parish rates at the present moment are paid by the landlords, not by the ground landlord, but by the lessee under the ground landlord.

2889. Do you not think such a practice would be beneficial as applicable to other districts of a similar nature?—Yes; I do not think the rates could be collected without a provision of that kind.

2890. Mr. *Cowper.*] In the case of those houses built for the poorer classes, can you give any idea of what proportion the expense of a good system of sewerage would bear to the whole expense of building the houses?—No, I cannot do that, but it would be very trifling indeed; the great expense would be in the rates. I think the commissioners should be compelled to make great lines of sewers through every district on which buildings now stand, or on which they are about to be erected.

Thomàs Allason, Esq. called in; and Examined.

T. Allason, Esq.

2891. *Chairman.*] YOU are extensively acquainted with buildings?—I am.

2892. In what district?—I have been surveyor to a fire-office for the last 15 years; I have been 36 years in the profession.

2893. With what districts are you particularly acquainted?—I am acquainted with the whole of London.

2894. Are you well acquainted with the populous districts in the south and east of London, Lambeth, Rotherhithe, and others, in which a great body of the working classes reside?—I am.

2895. Are you aware that in many districts the form of the construction of the buildings they reside in is found very injurious to the health of the inhabitants?—Highly objectionable.

2896. Such as close courts, the entrances to which are often under archways, through which courts there is no thoroughfare for the air?—Yes.

2897. In which the houses are built very close to each other, and many others in which they are built back to back?—Yes.

2898. All these forms of construction apply in many parts of London?—Yes, it is general in that class of building.

2899. Are there many in which there are cellar dwellings?—Yes.

2900. Do you not consider that, considering the bad effects of buildings of this nature, some prospective regulations are necessary for the prevention of them?—They are absolutely necessary.

2901. Does your knowledge extend to buildings in other populous towns of the kingdom?—To the large towns generally, such as Birmingham, Norwich, Liverpool, and so on.

2902. Does the same apply to other large towns?—Yes, and Manchester also.

2903. From the vast increase of population of this class, you think those regulations are essentially necessary?—Unquestionably.

2904. Do you think some regulations to prevent the construction of buildings in those forms would be beneficial if introduced into a Building Act?—Yes.

2905. Houses are divided into different rates; taking those inhabited by the humbler classes, would there be any difficulty in laying down regulations which would

would be beneficial?—I think there would not; that such regulations might be laid down as would prevent that inferior class of buildings being erected at any time.

2906. You are of opinion that to the inferior classes this construction of their dwellings is highly injurious to health?—Just so.

2907. Do you not think that one regulation should be that houses should not be built in close courts without a thorough ventilation of air?—That should be one leading feature, certainly.

2908. That there should not be cellars occupied for habitations permitted, unless there was, at all events, a drainage below the surface of the cellar?—Certainly.

2909. Thirdly, that no houses for human habitations should be permitted to be built back to back?—Certainly; there can be no ventilation in such a case, and not sufficient light.

2910. In addition to this, do you not think that with regard to rows of houses in populous districts there should be some regulation as to the space left in the front of them?—I do, certainly.

2911. And also behind them?—Yes.

2912. Have you turned your attention to what proportion of height would be desirable?—I have not given the matter very deep reflection; but having heard the evidence of Mr. Pennethorne, I have turned the matter in my mind, and I should lay down this regulation, that the height of the houses should determine the width of the street, whether it be a street in a public place, or in a corner of St. Giles's.

2913. You would not probably enforce so great a width at the back of them, but some proportion should be taken?—I should, even at the back, as far as the main buildings; for instance, in the lower classes of houses, if there is a width of 20 feet between the fronts of the houses in the rear, there should likewise be a width of 20 feet between the width of the main house.

2914. You would not prevent lean-to's, or small buildings below?—No.

2915. But it would be desirable to have some space even between the ground-floors?—Yes; that regulation gives the best effect to a street. A street where the houses are 50 feet high should be at least 50 feet wide; then the sun has an angle of 45 degrees, which gives great cheerfulness and air.

2916. Do not you think that in any such Building Act there ought to be regulations providing for the erection of those buildings necessary for the decency and comfort of the inhabitants?—No doubt of it; and if they could be made separate for each house, it would be very desirable.

2917. You think there should be proper regulations referable to the drainage of the district?—Yes.

2918. Also proper conveniences for the refuse offal and ashes cast out?—Yes.

2919. Without defining what it should be, but such as the experience of persons conversant with these matters would determine?—Certainly.

2920. Would there be any difficulty in carrying out regulations on these subjects?—None at all, in my opinion.

2921. With reference to drainage, is that a point to which you have turned your attention?—I have, particularly.

2922. In many of those populous districts there is no system of under-ground drainage, or a very imperfect one?—None; and I think all the object would be very well attained, without effecting it in a compulsory manner, by a good system of drainage.

2923. That would go far to improve the health of those densely populated districts?—It would never be the interest of a freeholder to have that inferior class of buildings which they have now throughout the metropolis, and in all populous towns, if they were compelled, in the first instance, to adopt some regulations for drainage.

2924. Do you think a general Sewerage Act, which would lay down general regulations, so as to enable the inhabitants in all populous districts to choose trustees who might carry out those regulations, would be valuable?—I think the proprietor of the estate should incur the expense of his own drainage, under the surveillance of some public body.

2925. Mr. *Cowper.*] Why do you think that under a good system of drainage on inferior class of houses would not be built?—A freeholder or lessee, or

T. Allason, Esq.

22 May 1840.

party intending to cover the ground, would necessarily have to wait a considerable time, and incur an expense in making proper drains. The commissioners at the present time have certain regulations that no floor shall be placed in a situation that shall not have a certain height above the general drainage; but as it is, now the custom is first to build the house, or first to cover a district with houses, and then to effect the drainage of them in part.

2926. *Chairman.*] Is not that much more costly than if it were done at first? —Yes, and sometimes impossible. The city of London are now struggling with those difficulties; they have been in some districts obliged to shore up the whole of the houses, or to rebuild them; but the result is, that when you build before you construct your sewerage, one half or two-thirds of the houses are never drained at all, and it is at an increased expense that they can effect any drainage.

2927. Mr. *Cowper.*] You think a freeholder would not think it worth his while to build a very inferior class of houses, if he must first provide for the drainage?—Having made certain improvements upon the ground, though it would not be heavy on a good house, it may be 5 *l.* or 10 *l.*, and the freeholder has an interest in carving out his estate with all its advantages.

2928. *Chairman.*] You think a Drainage Act, making those regulations, would have an important influence on the health of the inhabitants?—I think it would.

2929. Are you not aware that the commissioners acting under district Acts have no power to compel the inhabitants of houses to connect their houses by under-ground drainage with the sewers?—There is no power.

2930. Secondly, they have no power to prevent cesspools for liquid refuse being sunk down below the level of the sewers?—None whatever.

2931. And thirdly, they have no power, as they conceive, to build new sewers up to new bodies of houses if erected?—Not in all cases; they have in certain points; they are now proceeding in connecting main lines of sewerage for the purpose of improved drainage to the district.

2932. Do you not think that such powers as have been referred to, which they do not at present possess, ought to be given to them?—No doubt.

2933. Should not there be some system of inspection in those thickly-peopled districts, so as to see that a proper system of cleansing and scavenging, and so on, takes place?—Certainly that is necessary.

2934. At present that is very greatly neglected? In some districts totally.

2935. The health of the inhabitants suffers in consequence?—Very much.

2936. Do you not think such inspectors should have the power of reporting any matters which interfere with the health of the inhabitants to some competent authority?—That would be very proper.

2937. Do you think a board of health, chosen by the rate-payers, or in some manner, to preside over populous districts, and to whom the inspectors might report, would be a valuable establishment?—Certainly it would.

2938. Do you not think that some such suggestions as these are absolutely necessary to be carried out for the sake of the health of the vast masses of the community now congregated together in large towns?—Certainly.

2939. And that the necessity is every day more pressing?—Certainly.

2940. Are you aware that fevers and other contagious disorders generated in those districts frequently spread into other portions of the town?—I believe that to be the case.

2941. Are you aware that, in consequence of the illness caused by the neglect referred to, very great expense is continually cast upon the parishes and upon the richer classes, either in the form of poor's rates, or contributions to assist those whose health is so injured?—Yes, I know that.

2942. Then the regulations contemplated would produce a very considerable saving in those points, either to the parish or to the richer classes?—Undoubtedly.

2943. Are there any other general suggestions on these points you would favour the Committee with?—If you could secure a perfect drainage and a good supply of water, all other matters would follow of course; everything hinges upon those.

2944. The inspector would have the power of putting down all nuisances in his district?—Yes.

2945. As, for instance, slaughter-houses, cemeteries, burying-grounds, from which any noxious vapour might arise, and any kind of manufactory which was found

found within a crowded district extremely injurious to the health of the inhabitants?—Yes.

2946. Such an officer would be very valuable?—Certainly.

2947. Mr. *Cowper.*] Does it occur to you that there is any existing authority who might take the duties of inspector upon him?—No, I think not; there is only the beadle, or constable of the parish; the beadle is a parochial officer.

2948. *Chairman.*] Some person might be appointed, either by the rate-payers or the board of guardians?—I think a more important personage is requisite than the beadle; a person of intelligence and information.

2949. Mr. *Cowper.*] Would it be desirable he should be a medical man?—No, I do not think that is essential; if there is a board of health a medical man would be essential.

2950. Mr. *Mackinnon.*] You think no legislative enactment would be necessary if you have good drainage?—My opinion is, that no legislative enactment would be necessary if there was good drainage and an ample supply of water.

2951. In the first part of your evidence, you stated you would recommend that whenever a street was built the width of it should be in proportion to the height of the houses; would not that very much trench upon the rights of private property, if a person bought land and wished to build upon it houses of a certain rate?—Yes; but then I think another object is paramount to that, and that is the public benefit.

2952. Are you not aware that though houses might not be so far apart as you recommend, perhaps they would come within six inches or a foot of the width, and do you not think it would be very hard to prevent their building those houses of a certain description?—I believe the present regulation with regard to public roads is, that no house shall be built within 30 feet of the centre, but sometimes I believe it is done. Where parties have property on the road-side they might consider it a hardship that the public benefit should be considered in preference to their individual rights, but they might find in the end their property was improved.

2953. *Chairman.*] You would as little as possible interfere with private property; you would only enforce that which you consider essential to the health of the inhabitants?—Just so.

2954. Mr. *Mackinnon.*] Would you think that the parish vestry would be the proper persons to appoint the inspector?—I think so.

2955. Do you think if a board of health was established who should nominate a person to act as surveyor, the power of appointing that board of health had better be in the guardians, in the vestry, or in the magistrates?—I think the vestry would be competent to select the proper individual, and that it would be most agreeable in general that that should be the case.

2956. You would not be afraid of jobbing?—I think that would not be possible now.

2957. Are you of opinion that the having cemeteries or burial-places within populous towns is injurious to the health of the inhabitants?—I consider it highly so.

2958. Has it come under your knowledge that places for slaughtering animals are injurious to health?—They are very unsightly and disgusting, but I do not think that any injury arises from them.

2959. Do you think any injury to the inhabitants arises from Smithfield market?—I never heard of any objection arising from that circumstance.

2960. Mr. *Greene.*] The slaughtering of cattle in cellars is frequently practised in London; do you think that injurious to health?—I think if you look at the slaughtermen they are generally very healthy men.

2961. Mr. *Cowper.*] Do you know whether the slaughter-houses are well drained in London?—In many cases they are, but in many others not at all; in Whitechapel the whole of the drainage there is surface drainage, and generally throughout the city; there is no part of the metropolis so ill drained as the city of London.

2962. That is not healthy?—No, for the whole mass is impeded in the gutter, and there it lies in hot weather to become fetid and putrid.

2963. You think if the slaughter-houses are well drained they are not injurious to health?—I think not.

Joseph Hodgson, Esq. called in; and Examined.

J. Hodgson, Esq.

22 May 1840.

2964. *Chairman.*] YOU are a medical man, residing at Birmingham?—Yes.

2965. How many years have you been resident there?—Upwards of 20 years.

2966. During that time you have been in extensive practice throughout the district as well as Birmingham?—Yes, in pretty extensive practice.

2967. Are you well acquainted with the state of the habitations and the habits of the poorer classes of Birmingham?—Yes, in the town I am tolerably well acquainted with them.

2968. The Committee understand that the habitations of the humbler classes in Birmingham are superior, in many points, to the habitations of the corresponding classes in the Lancashire towns; that, generally speaking, each family has a habitation for itself; that they do not live in flats one above another; and that they do not reside in cellars, as they do in some of the Lancashire towns?—That is the case.

2969. Are there in Birmingham many close courts to which there is not a free access of air?—Yes, there are some in the old part of the town, but not many in the modern parts of the town.

2670. Are there some in which the houses are built back to back?—Many are built back to back.

2671. Do not you consider such a construction injurious to the health of the inhabitants?—I think that depends very much upon the size of the rooms, the size of the windows, and the size of the court altogether.

2972. Comparing one class of courts with another, one in which the houses are built back to back and another in which they are not built back to back, are not those in which they are not built back to back preferable?—In the courts in Birmingham where they are not built back to back there is not always thorough ventilation; there is not a window on the other side of the house, in many cases; they seem to have been so erected in the expectation that others would be built behind them; it is the general practice to build so.

2973. Birmingham has increased rapidly in population within the last 30 years?—Yes, extremely so.

2974. Is there any general Building Act in Birmingham?—I am not aware that there is any general Building Act; but there exists in the town a body of commissioners, possessing powers under an Act of Parliament. This board has considerable powers with reference to the erection of buildings, the sewerage, cleansing, lighting and paving, and so on.

2975. That power is, in many respects, very well exercised, is it not?—Extremely well exercised, and becoming more so every day.

2976. You have in Birmingham some considerable advantages in the form of the land on which Birmingham is situated; it is undulating?—There are very great natural advantages in Birmingham in this respect; it is built, for the most part, on the sides of hills, and the valleys which divide these hills constitute a natural drainage; the soil also, being sandy and gravelly, is very porous; the moisture readily percolates, and what does not run down the drains is absorbed.

2977. Are there not some portions of the suburbs of Birmingham in which there are open drains of a noisome nature?—There are some, but not so many as there were at the time the cholera prevailed in this country. In consequence of the spread of the cholera to neighbouring towns, we sought out all those drains, and had some of them covered over; others have been covered since; there are now very few in the town; there are some in the neighbourhood of the town.

2978. Mr. *Cowper.*] On whom did the expense fall?—Some part of it on the Cholera Board; we got the money from the overseers of the poor, under an order from the Government; but since that time, what has been done has been done, I believe, by the commissioners.

2979. *Chairman.*] Have the precautions taken in consequence of that visitation been beneficial to the inhabitants?—I cannot say that they have been particularly so; of course they have been so in some degree.

2980. Will you be kind enough, with reference to the subject on which the Committee are inquiring, namely, sanitary regulations with reference to the humbler classes in large towns, to lay before the Committee any suggestions which occur to you?—On the subject of drainage, I would say the commissioners of the streets in Birmingham have considerable power, which they execute very well indeed; lately they have appointed a very able man as the surveyor, who is making

making great improvements in the condition of the roads and the drainage, but very great difficulties, I believe, arose from there being no plan or scheme originally by which the sewers were laid down; they are not, in all parts, laid down on a right level; I am told that in many parts of the town the levels are so high that they do not drain the cellars; we might almost as well have no drains at all, as far as the houses are concerned, as such drains; then again, in my opinion, the main sewers are of comparatively little advantage, unless they are so large that a man can go up and clean them, or unless there is a great fall in them; there are very few in Birmingham large enough to admit a man to go up and clean them; the consequence is, an obstruction takes place in one, the liquid accumulates above that obstruction; they are not aware of it till it begins to annoy the people in the houses, and when this happens, there is for a time a great stagnant pool of corruption under ground. It is very important that the size of the main drains should be such that a man could go up them, that they should be laid so deep as to drain the cellars, and that there should be a certain slope, so that everything should run out quickly; in many instances I believe that is not the case. Another point with regard to drainage is this, I think that above-ground drainage is better than under-ground drainage, unless the drain has a great fall, or is so large that a man can get up and clean it; for when an under-ground drain becomes obstructed, there is an accumulation of filth, in consequence of its not being known, whereas it is readily seen and removed in above-ground drains.

2981. Those above-ground drains, unless constantly inspected, are liable to be choked?—Yes; but I think they should be inspected: there should be a main drain in the street laid very deep; then the houses must of course have them under ground to drain the cellars; but I speak especially with reference to drains out of courts and alleys when under ground; these are very apt to become choked, and remain so for a length of time.

2982. If they were constructed of a proper slope and the proper width, they would not be liable to be choked?—No, if the weirs or grates were kept in proper order.

2983. Do you not think a general Drainage Act applicable to those districts where there is no drainage at present, which would enable the inhabitants, through commissioners or trustees, to bring into force proper regulations, would be valuable, not interfering with existing authorities, but giving them more powers where they are wanted?—I think some additional powers might be well. I was about to mention a circumstance which often occurs: a street is laid out, a man takes a bit of ground and builds a house; there is no sewer in that situation, but perhaps there is a main sewer at some distance; he carries a small detached drain from his own house to this sewer; another takes a bit of ground next to his house, and there will be another drain made from his house. Before a street is built, it would be a very good thing if the commissioners or others were compelled to make a main sewer; there is very often none till the street is built; there should be some regulation by which a general plan of sewerage would be secured before the houses are erected. I believe the great objection to doing this has been the expense of it, the commissioners being unwilling or unable to incur the expense until the street is nearly finished.

2984. Do you not think that a general Sewerage Act, under the powers of which the inhabitants might meet and carry such a plan into effect, would be desirable?—Yes; there are difficulties which can only be met in that way; I should think that some board like the commissioners of the streets in Birmingham is extremely desirable in every town or district.

2985. Mr. *Cowper*.] What do the commissioners of the streets in Birmingham do with reference to new streets?—We will suppose a street about to be built; they do nothing with reference to the sewers until a certain portion of the street is built; you may get near to one if you can; they will let you, if there is a sewer in the neighbourhood, carry a drain into it, but they will not require you to do it.

2986. Have they no power?—I cannot say whether they have the power.

2987. *Chairman*.] Practically this system is inefficient for the purposes of general drainage?—When a sewer is made, it is very easy to enforce drains being made into it, but on a street being begun, the people building the houses are not obliged to provide drainage before the street is begun.

J. Hodgson, Esq.

22 May 1840.

2988. Mr. *Cowper.*] It would be very desirable to have the sewer provided before the houses are built?—Yes, it would be, certainly.

2989. Mr. *Mackinnon.*] The great difficulty is the expense, where there is no immediate prospect of benefit?—Just so.

2990. *Chairman.*] Are there any other suggestions you would make, referable to measures to promote the general health of the inhabitants?—I think that one great source of disease in Birmingham is the existence of poor lodging-houses, and not only of disease, but of immorality and crime and very great misery; that what are generally called beggars' lodging-houses are great sources of disease and crime, and demoralization in every way.

2991. Does fever frequently prevail there?—Fever is rare, comparatively, in Birmingham; it is a very healthy town; there is very rarely any severe contagious fever in the town; but when there is any contagious disorder, it often begins in those beggars' lodging-houses, which abound in the town, which are great sources of disease and vice. I have been informed by the head of the police, and by several of the police, that it is hardly possible to conceive these houses to be in a worse state in any town in the kingdom.

2992. Do you think you require additional authority for the purpose of the inspection, cleansing, and regulation of lodging-houses?—I think it would be extremely conducive to the welfare of the community if those lodging-houses were under some system of inspection, or there were places provided to which trampers and beggars could resort, and which should be kept in a healthy condition.

2993. Some precautions appear necessary, not only for the health of that class, but for the prevention of the spreading of contagious disorders from those places into other districts of the country?—Just so.

2994. Many of those persons are migratory in their habits, and therefore any contagion they receive is likely to spread to other parts of the country?—Certainly; it is important not only on account of the inmates themselves, but the persons who live in the neighbourhood, and it is important in a moral point of view, that those places should be under some inspection; they certainly are great nests and sources of crime.

2995. At the present time is there any regulation which provides for attention to cleanliness in those lodging-houses?—I am not aware of any.

2996. Supposing that a fever has prevailed in any of those lodging-houses, is there any precaution which could be taken by any one authoritatively to prevents its continuing in that state?—I am not aware of anything which could be done. I think there should be some system to insure the seeing in what state those places are, and of compelling their being put into a proper state.

2997. Do you think that if this duty were committed to the same person who sees to the state of the scavengers' work, and so on, if an officer were appointed for that purpose, that would be beneficial?—I think that the person looking after the lodging-houses would have enough to do; that the lodging-houses would be better under the supervision of the police.

2998. You think an inspector for the purpose of seeing to the state of the courts and alleys, and the cleansing of them, would be very beneficial?—Extremely so; very desirable.

2999. Do you not think such an officer, in the present state of towns, is very desirable?—I think it is very desirable, there should be such a person.

3000. Such a person would have the power of reporting to some competent authority for the purpose of having such evils removed?—Yes, and have the power of removing them, not merely reporting.

3001. Do you think a board of health, chosen by the poor law guardians or the rate payers, would be desirable, for the purpose of attending to the health of the inhabitants, and making such regulations as would be necessary?—I hardly know whether a medical board of health would be required; it would be well that there should be some power to look into these matters, of course; whether it should be done by any existing body, or whether it should be a fresh body, is another thing.

3002. Who should make such suggestions, not only of a remedial nature, but of a preventive nature, looking forward to what they might expect might flow from the indirect precautions they would suggest for improvements from time to time?—Yes, I think that would be desirable; but I apprehend the commissioners of the streets in Birmingham would feel it their duty to look after these matters if they had the power to do so

3003. Your town being, from its situation, well kept in point of health, and well attended to in point of sewerage?—Pretty well in point of sewerage.

3004. Would it not be desirable to have some officer appointed in other places which have not the same advantages that you have?—It would be very desirable indeed, in my opinion.

3005. Is there any other circumstance you would mention?—There is one other point I would mention: there is a habit in Birmingham of keeping pigs in the courts and in the houses of the poor, which is productive of great evil. I think the condition of the privies, and the ash-holes and the receptacles for filth ought to be under some sort of supervision; they are in a very bad state indeed in some parts of the town. I think in all large towns there should be a power to compel the people to keep those places in a good state, or to do it for them, and to prevent their having the pigs living with them in the courts and alleys and houses.

3006. The duty of the inspector would be to remove, or take measures for the removal, of nuisances of any kind which might be injurious to health?—Yes; the commissioners in Birmingham have the power, I believe, to fine a person if he does not empty his ash-hole when it becomes a nuisance; but suppose he does not do it; he is living in a place perhaps paying 2 *s.* 6 *d.* a week rent; he cannot afford the expense of doing it; the commissioners of streets should have the power to do it themselves, at the public cost, or at the cost of the landlord.

3007. Are you aware that in the Metropolitan Police Act there is a clause enabling the authorities to give notice to any person that those things are in a bad state, and to order them to do a certain thing, and if they do not do it, to do it themselves and charge them the expense of it?—Yes, but it is of no use charging these poor persons with the expense; it ought to be done at the public cost, or charged on the landlord. It is absolutely necessary, if not paid by the public, to make the landlord responsible for such charges. The overseers of the poor compound with the landlord for the poors'-rates, and so it should be with regard to the cleansing and lighting, and all that. The landlord should be made the responsible person, let him make what agreement he pleases with his tenant, otherwise it will not be done, for the tenants of such dwellings have not the means of doing it. Very few of the inhabitants live in cellars in Birmingham; the lower classes of persons live in small houses in courts principally. Much is said against living in cellars, but if they are sufficiently lighted and well ventilated, I know many which are not unwholesome.

3008. Are they well drained?—In Birmingham the nature of the soil and the declivity occasions the houses being generally well drained. I know many cases where servants and others live in cellars, and where there is no disease from this cause.

3009. Those are cases in which there are areas on each side?—Generally, and where the windows are large.

3010. With reference to the district between Birmingham and Wolverhampton, comprising Bilston, Wednesbury, and a very populous district, what is the state of the habitations of the poorer classes in the more crowded parts?—I do not think I have a sufficient knowledge of the habitations of the poorer classes in those districts to be able to give much information about them. I think in some of them it is evident that the habitations are of a very miserable kind, and that there is no drainage; but there would be great difficulty in adopting any general plan there, for the houses are not built in streets, but a few together in many situations.

3011. There are Wednesbury, Bilston, Walsall, and other towns?—Yes, some of them are very large, as Walsall and Bilston. The observations made as to large towns generally would apply to them.

3012. They are deficient in drainage?—I believe them to be so. I have seen the abodes of the poor in Liverpool and Manchester and London, and I conceive, with reference to Birmingham, the poor in Birmingham, as to habitations, are much better off.

3013. Have you a good supply of water in Birmingham?—Yes; it is hard in the upper part of the town.

3014. You consider a good supply of water essential to the health of the inhabitants?—Certainly.

3015. Mr. *Mackinnon.*] You conceive that being on a sandy soil is favourable to health?—Yes; and the nature of the occupations of the poor at Birmingham,

J. Hodgson, Esq.

22 May 1840.

generally speaking, I do not consider to be unhealthy. They are not much crowded in low ill-ventilated rooms, they work for the most part in the neighbourhood of large fires, and have their windows and doors open very much.

3016. *Chairman.*] There are a great number of day schools and dame schools, and so on, in Birmingham?—All sorts of schools.

3017. Have they generally play-grounds for the children?—In some they have. I know an infant school, which I am in the habit of looking into, in the very middle of the town; they have a piece of ground, quite enough; and I know another large school where they have a play-ground; they have generally a little bit, more or less.

3018. Do not you think that some such provision is very advantageous to the health of the inhabitants?—Certainly; there cannot be a doubt about that; good air and exercise are essential to health.

3019. Mr. *Mackinnon.*] Do you think that any injury arises to the health of the inhabitants from burial-places within the town?—In a general way, one would conceive it must be injurious; but after all, I cannot help expressing my doubts whether merely putrid animal matter is injurious to health. I think putrid decomposed vegetable matter is very injurious to health, and occasions what we call miasma; but taking all the facts together, I think it is very doubtful whether much injury arises from putrid animal matter. I cannot help being struck by some facts, looking at butchers, looking at persons who work in animal matter, men in dissecting-rooms, and so on.

3020. You think that putrefied animal matter is not so injurious as putrefied vegetable substance, in a damp situation?—I think that being exposed to the contact or fumes of putrefied animal matter is not so likely to produce disease as being exposed to the contact of decomposing vegetable matter, particularly if accompanied with moisture.

3021. Mr. *Vigors.*] Are there many of the lower class of Irish in Birmingham?—A considerable number; they are chiefly employed by the builders.

3022. Are their habits worse than those of the lower classes of the town generally, as to cleanliness, and so on?—The habits of the poorer classes of the Irish in Birmingham are better than those of the poorer classes of the Irish I have met with in other places; they are not so reckless, and appear to be better off.

William Henry Miller, Esq. a Member of the House, Examined.

W. H. Miller, Esq. M.P.

3023. Mr. *Mackinnon.*] YOU are a Member of the House of Commons?—I am.

3024. Some information is required with regard to the manner in which the neighbourhood of Edinburgh is irrigated, as far as the health of the inhabitants of that town is concerned. Will you have the kindness to state to the Committee your opinion on this subject of the manner in which the meadows of that city are irrigated?—I shall be happy to state, as far as I know, the circumstances connected with the irrigation near Edinburgh.

3025. How long have you been acquainted with the neighbourhood of Edinburgh?—For 36 years.

3026. How are the meadows irrigated?—The meadows on the east side of Edinburgh are irrigated from a stream, which rises partly from springs in several places in or near Edinburgh, and which receives the water which formerly formed the North Loch, and much of the surface water and sewerage of the city and neighbourhood.

3027. Has this stream ever been used for other purposes?—It was used early in the present century as a mill-stream for many years, but the mill was given up about 20 years ago, as it was thought to interfere sometimes in summer with the supply of water for the meadows.

3028. Was there not a case brought into the courts some years ago on this question?—There was. About 35 years ago, Mr. Duncan, who had a house at Restalrig, about two miles from Edinburgh, and very near the stream, brought an action against the tenants of the proprietors of the stream, to restrain them from irrigating their lands, or from forming ponds to collect the sediment of the stream, which several of them were in the practice of doing. It was proved in evidence, that not only was the village of Restalrig and the neighbourhood perfectly healthy, but rather remarkable for the longevity of its inhabitants. Mr. Duncan lost his cause, with full expenses.

3029. Did Mr. Duncan after his failure in that action continue to reside there?—He afterwards rebuilt his house, at an expense of 8,000*l.* or 10,000 *l.*, and continued to reside there till his death, at a very advanced age.

3030. Has the extent of irrigated meadows to the east of the city been much increased within your remembrance?—There was a considerable increase about 18 or 20 years ago along the sea-shore, and at the distance of several miles from the city; but between Restalrig and the city there has, I think, been no increase.

3031. Has there been no increase in any situation within a mile and a half or two miles of the city?—I think no increase whatever; I think I heard that Lord Moray's tenant had levelled an old sand-pit adjoining his meadows, and added it to them; but on the otherhand, a piece was taken off those meadows, about 20 years ago, for a public road.

3032. How long has this land been under irrigation?—A very considerable portion, including all or most of that part nearest to the city, has been under irrigation quite beyond all memory.

3033. Has any portion been irrigated for the first time within the last 10 or 15 years?—Within the last 10 years, certainly there has been no increase whatever of the meadows to the east of the city; within the last 15 or 16, I think there has not been any increase. About 12 years ago, there were several fields added to the meadows, but a part of the old meadow was ploughed up, and has not been since irrigated.

3034. As you state that the neighbourhood of these meadows is perfectly healthy, their extent can be of little importance to the public?—Certainly not; but it has been attempted to connect alleged increase of disease in Edinburgh with pretended recent increase of irrigation.

3035. Does any considerable proportion of this irrigated ground belong to you?—A very considerable proportion; all those meadows between the village of Restalrig and the sea.

3036. To what extent may that be?—To the best of my knowledge, the whole of the irrigated meadows to the east of the city are considerably under 200 Scotch acres; they may a little exceed 200 imperial acres; and of that quantity perhaps 40 or 50 acres may belong to different proprietors within two miles of the city, and the remaining portion, all of which is about two miles from the city, or from that to three miles, belongs to myself. I should think perhaps 130 Scotch acres belong to myself; mine is all a considerable distance from the city.

3037. Do you believe the meadows to the west of Edinburgh to be of equal extent with those on the east side?—They are of nothing like equal extent. I have very little acquaintance with them, but I believe there are only about 50 acres.

3038. Have you any residence on this property, and is it near the irrigated lands, or the stream from which they are irrigated?—I have a residence within 50 yards of the main stream from which the lands are irrigated, and within the same distance of a portion of the irrigated meadow.

3039. Have you resided there a considerable period?—For the last 16 years; it was formerly let on lease; I have repeatedly resided there for three or four months at a time. I have resided there at one period for 14 months, without having been absent for a single night.

3040. Have you found much inconvenience from the alleged nuisance arising from this mode of irrigation?—Not the slightest; my family and servants have found it perfectly healthy at all times.

3041. If you had thought it at all unhealthy, of course you would not have resided there with your family?—Certainly not for a single day; 17 years ago, before repairing the house to make it fit for an occasional residence, I remember asking the late Dr. Hamilton, senior, an eminent physician in Edinburgh, and well known by his writings, and with whom I was well acquainted, whether it was not possible, notwithstanding the general healthiness of the neighbourhood, that it might be unadvisable to live so very close to this stream, nearer in fact than almost any other house; he said that it was quite impossible that there should be the slightest injury to health from this cause.

3042. Though you have experienced no injury to health, have you not sometimes felt an unpleasant smell from the stream?—Yes; but this has been chiefly in consequence of the very improper admission of gas water into the stream; there is very little smell of any other kind; and even notwithstanding the frequent

W. H. Miller, Esq. M.P.

22 May 1840.

quent admission of gas water, I have sometimes resided there for a month together, without ever feeling any smell whatever 10 yards from the bank; at other times the smell of gas has certainly been very disagreeable. The gas water was, I believe, put in only on some days of the week, and generally at an early hour; it must on those occasions have been very offensive close to the city, where it first mixes with the drainage of the valley above.

3043. You attribute the smell to the gas water?—I do, and I believe it was the infusion of it into the burn which was the chief cause of complaint.

3044. Could not the gas company have been prevented from putting their refuse into the stream?—I have no doubt they could; they have lately applied for a new Act; the proprietors of the stream determined to interfere, but they were saved all trouble in the matter, for the Committee on the Bill unanimously inserted a clause to stop the practice of putting gas refuse into this stream, but at the same time giving the privilege of putting it in for six months, until the company can make new arrangements for otherwise disposing of it.

3045. When and in what way did you first, at any time after Mr. Duncan's process, 35 years ago, find the salubrity of the meadows and their neighbourhood called in question?—When the cholera was in this country, in 1832, anonymous letters were inserted in some Edinburgh newspapers, representing the meadows as a source of contagion.

3046. Were there any cases of cholera in the village of Restalrig and its neighbourhood?—I believe not one; I think I was told that one case was reported, but it was said afterwards to be a mistake.

3047. Are the Committee to understand the last time the commissioners applied for a Police Bill no attempt was made to interfere with the irrigation?—The last time the commissioners applied for a Police Bill no attempt whatever was made to interfere with the irrigation; in 1832, and again in 1834, they did attempt to interfere with the irrigation, indirectly, by a drain clause in the Police Bills, and a proviso was inserted in the drain clause, which defeated their object, by the Committees on the Bills; but when they last applied for a Police Bill they voluntarily inserted that proviso, and did not at all attempt to interfere with the irrigation, nor to obtain any power which could by possibility enable them to interfere with it.

3048. When and how did any further revival of this agitation take place?—I think in the spring of last year. In the first place, again by anonymous letters, attributing the alleged increase of fever to the meadows; then by several meetings, and by a pamphlet published by the police commissioners, and containing statements, from the accuracy of which throughout I entirely dissent.

3049. Do you believe that fever has prevailed more in Edinburgh than in other places?—Certainly not more than in many other places; never to anything like the extent it has in Glasgow, where there are no irrigated meadows.

3050. Are there barracks at Piershill, near Restalrig, and not far from the course of this stream?—There are.

3051. Have you any reason to suppose those barracks are less healthy than other barracks?—It has been so stated by some of the agitators I have mentioned, but I utterly disbelieve them. I have made no investigation on this head myself, but I am informed by a gentleman who has, that the barracks at Piershill are more healthy than any in Scotland, those in Edinburgh Castle excepted, and that the average cases of sickness and mortality in the cavalry barracks at Glasgow and Hamilton are 25 per cent. more than at Piershill.

3052. Has there been an extension of the irrigation near the barracks since you first knew the neighbourhood?—There is no more irrigation in the immediate neighbourhood of the barracks than when I first knew the neighbourhood, or than I believe had existed there long before the barracks were erected; but the ground where the stream passes nearest to the barracks is a market garden, which belonged to Mr. Duncan, and afterwards to the late Sir Henry Duncan. Part of this I remember meadow, and there also had been, I believe, formerly a pond for collecting the sediment of the water. Now the only use made of the water in this garden is for irrigating strawberry-beds.

3053. Have these ponds for collecting the sediment of the stream increased or diminished within your remembrance?—I think they have diminished. I had an acre of them. They were unsightly and of little value, and I filled them all

up

up and converted them into a meadow, 20 years ago. Such ponds may, however, be more valuable nearer to the city. *W. H. Miller*, Esq. M.P.

3054. Is there any clause in the Edinburgh Police Acts to prevent any one questioning the uses of the stream?—Certainly there is no such clause. The uses of the stream are sufficiently protected, as already proved, by their innocence, and by the unquestionable right of property in the stream; either of these would be sufficient. The only protecting clause or proviso in the Police Bill is that to restrain the attempt to divert any portion of the water from its natural course, under the pretence of making drains. 22 May 1840.

3055. Has the irrigation been introduced near houses which existed previously?—Not that I know of; certainly not on the east side of Edinburgh; but various respectable houses have been built close to the irrigated lands of late years.

Martis, 26° *die Maii*, 1840.

MEMBERS PRESENT.

Mr. Baines.	Mr. Slaney,
Mr. Brotherton.	Lord James Stuart.
Mr. Cowper.	Mr. Tufnell.
Mr. Ingham.	Mr. Vigors.
Mr. Mackinnon.	

R. A. SLANEY, Esq. IN THE CHAIR.

Mr. *William Sowten*, called in; and Examined

3056. *Chairman.*] WHERE do you reside?—In the Westminster Road. Mr. *W. Sowten.*

3057. Are you the proprietor of the baths there?—I am. 26 May 1840.

3058. The Committee has been informed that there have been lately established some baths, or rather an extensive plan for the accommodation of the different descriptions of persons, the richer and the humbler classes?—There have.

3059. How long have they been established?—This is the fifth season.

3060. Can you tell the Committee what is the price and the accommodation referable to the middling and the humbler classes?—The price for the middling classes is 1 *s.* for each bath, and for the humbler classes 3 *d.*

3061. What is the size of the bath for the middling classes?—One hundred and sixty feet long by 60 feet wide.

3062. How is that replenished?—It is constantly going through the operation of replenishing; we throw in 25,000 gallons of spring water every hour.

3063. And it flows out, does it?—Yes, into the two shores.

3064. What is the size of the other bath, the one for the humbler classes?—The mechanics' bath is 200 feet long by 50 feet wide in the water; the building is 70 feet wide.

3065. Is that also continually replenished in the same way?—No, that is done in this way: we pass off the water from the best baths through a filtering bed again into the mechanics' baths; that is, a portion of it.

3066. What heat is it kept at?—The bath for the middling classes is kept at 80, the subscription bath at 84, and the mechanics' at 70.

3067. Mr. *Ingham.*] What is the subscription bath?—The subscription bath is a building in the centre, where the water is about 44 feet in length by twenty wide, with commodious dressing-rooms, and the water kept at 84.

3068. What is the price?—One shilling and sixpence for the single bath.

3069. *Chairman.*] With reference to the two other classes of baths, the one at 1 *s.* and the one at 3 *d.*, can you inform the Committee what are the respective numbers of persons that have visited those baths within any given period?—No, because it entirely depends upon the weather.

3070. Can you tell the Committee how many persons have visited them in a twelvemonth?—

Mr. *W. Sowten.*

26 May 1840.

a twelvemonth?—We only keep them open for six months during the year, that is, from the month of April to the month of October.

3071. Can you tell the Committee how many persons have visited the baths during those six months upon an average?—I should say the average of the season would be about 180,000 mechanics, and about 20,000 of the middling classes.

3072. In six months?—Yes.

3073. Including children and adults?—We do not let them in if they are children; that is, we do not let them in till they are from 10 to 12 years of age.

3074. Are there any separate baths calculated for the reception of women?—No, there are not.

3075. Have you kept any account of the number of persons that have visited the baths for the last five years?—Yes.

3076. Have you found that the numbers have gradually increased during that time?—No; they have gradually decreased.

3077. To what do you attribute that decrease?—To the excessive coldness of the last three summers.

3078. Then you refer it to the circumstance of the coldness of the weather, and not to any unwillingness on the part of the people to avail themselves of the baths?—Certainly not; because we find that, during the few hot months we have had, there have been quite as many as ever there were.

3079. Have you had an opportunity of hearing from medical men whether the persons who have used the baths have derived benefit from the use of them?—I am mortified to find that, instead of being used as matters of health, they have merely been used as matters of pleasure in a very great degree.

3080. They learn to swim, do they not?—Yes; an immense number of them are taught by us.

3081. Have you heard any opinions expressed by medical men that they are beneficial?—We have had some sent for medical purposes, and they have stated that they have derived great benefit from them.

3082. Are you aware, from medical opinions or otherwise, that the great body of the persons using them have derived benefit from them?—They have invariably expressed themselves very much refreshed and highly delighted.

3083. Are you aware whether there are any institutions of a similar nature in other parts of the metropolis, and to what extent?—There is one in Holborn, with which I am also in some degree connected.

3084. Is that a mechanics' bath?—Not at present; but it is their intention to build one as soon as they can get space enough.

3085. Is there any other in the nature of a mechanics' bath?—Yes, there is one in the Shepherdess-fields.

3086. Do you know what number of persons they accommodate?—They have two baths, but they are not so large as ours; I should think the numbers they would accommodate would be about half what we can.

3087. Do you know any others?—None that I am aware of.

3088. Have those baths in Shepherdess-fields been long established?—Longer than ours have; they have been established about nine years.

3089. Have they gone on improving?—They are just on precisely the same footing as the others; they have not improved on account of the weather.

3090. Mr. *Ingham.*] What are the terms of the baths in Shepherdess-fields?—One shilling, ninepence, and sixpence.

3091. *Chairman.*] Then there are none so low as yours?—None so low, and none so high.

3092. From your knowledge of the construction of baths generally, do you think there would be much difficulty, where there was a good supply of water, in establishing baths in large manufacturing towns, where there were many steam-engines?—Not the slightest.

3093. Would there be any difficulty in establishing baths in such towns as Birmingham and Manchester and Leeds?—No, not the least; and they would be better attended there than they are in London, on account of the smaller number of amusements which there are there.

3094. Do you think that any facility would be given by the number of steam-engines in the vicinity?—Most decidedly so.

3095. How is the water in your establishment heated?—We pass it through fire in pipes.

3096. Mr. *Ingham.*] Is it the furnace of the steam-engine you pass it through? —Yes, that and other furnaces as well.

3097. Have you a steam-engine?—Yes, for the purpose of raising the water.

3098. *Chairman.*] The expense of heating any given number of cubic feet of water would be proportioned, in some measure, to the cost of the fuel, would it not?—Yes, and the application of the heat.

3099. Therefore the cost of heating baths of this nature would be less in a district where the cost of fuel was less?—Of course; in fact if it were in the neighbourhood of Manchester or Liverpool, there would be no necessity for heating the water at all.

3100. Mr. *Ingham.*] How would they get their supply?—There would be quite sufficient water for the supply from the condensation of the engines, passing it through filtering beds prior to its getting into the bath.

3101. *Chairman.*] At all events, then, in all the great manufacturing towns which are situated within coal districts, and where coals are cheap in those districts where such accommodation is most wanted, the heating of the water would be the cheapest?—Certainly.

3102. Mr. *Ingham.*] Can you tell the Committee what is the greatest number of persons that ever attended at your baths in any one day?—There were 2,500 in the mechanics' bath, and 1,000 in the other two.

3103. At what hours do you find they most frequently attend?—In the working days after six o'clock in the evening, and on Sundays in the morning and afternoon.

3104. What description of persons are they that frequent the mechanics' bath? —They are of an exceedingly bad description; not at all the description of persons that I reckoned upon when I fitted up the place.

3105. Are there any large manufacturing establishments near to your premises? —None at all, except Messrs. Maudesleys'.

3106. Do the men from Messrs. Maudesleys' works attend?—Yes, a great number of them do, and also from Mr. Clowes'.

3107. That is a printing establishment, is it not?—Yes.

3108. Had you more men that attended the mechanics' bath in the succeeding years than you had the first?—The first year we had not the mechanics' bath open.

3109. Then you have only had it open one season before the unfavourable summers set in?—Exactly so.

3110. But it is your intention at the baths in Holborn, as soon as you can get a sufficient space for the establishing of a mechanics' bath, to establish one there also, is it not?—Yes.

3111. *Chairman.*] Should you think, from your experience of the mechanics' bath, that it is a preferable employment for your capital to the superior baths? —I think it is preferable.

3112. Then the advice you would give to any person in the establishing of public baths, would be to have large accommodation for those persons who are of the class of mechanics?—No doubt of it.

3113. And comparing what takes place at your establishment with what has taken place at Shepherdess-fields, do you think it preferable to charge only threepence, instead of retaining the charge of sixpence?—I have had some doubts upon the subject, as to whether the same quantity of money would not be obtained if the charge of sixpence were made instead of threepence, and there would be much less vagabondism and noise.

3114. You have not examined the accounts of those baths at all, have you? —No.

3115. Is there anything that has occurred to you upon the subject of baths that you wish to mention to the Committee; anything as to the method of increasing the use of baths?—No; unless we could find some mode of insuring warm weather.

George Alfred Walker, Esq. called in; and Examined.

3116. *Chairman.*] You are a medical man residing in the neighbourhood of Drury-lane, are you not?—I am.

3117. That is a district surrounded by a populous neighbourhood, with a considerable

G. A. Walker, Esq.

26 May 1840.

siderable number of courts opening into it in different directions, is it not?—Yes; but I consider it a good neighbourhood upon the whole.

3118. Are there not some courts in which there is no exit through them?—Yes; there is a cul-de-sac, named Wellington Court formerly, and which is now called Nag's-head Court.

3119. Is that inhabited by a considerable number of persons of the poorer class?—It is inhabited principally by Irish. The sewerage is in a very bad state; in fact, there is no sewerage there; there is a contrivance which is a sort of cabinet d'aisance, in which the excrementitious matter has frequently been ankle deep on the floor. I visited the place only yesterday.

3120. Mr. *Cowper*.] Do you mean the floor of the house?—You pass through a passage, you enter the passage door, and in the corner is this place, and a most filthy and disgusting one it is.

3121. *Chairman*.] Is there any system of cleansing or scavengering there?—There used to be a contrivance that would be something like an ordinary place; there are two holes, and when they are filled with the excrementitious matter it may, perhaps, pass through into a reservoir, or else run over the seat, whichever may chance to happen.

3122. Is there any system of scavengering and cleansing by proper authority?—No; it is most grossly neglected.

3123. Does the health of the inhabitants suffer in consequence of the want of draining and cleansing, and the neglect of sanitary regulations, in that district?—Most unquestionably; and it is easily provable.

3124. Does fever prevail in that district to any extent?—Yes; I do not speak of the immediate district, but right and left about it. I have had two most terrible cases of disease in that court lately.

3125. Are there any other courts in the vicinity, which, though not so much neglected as that, are somewhat in a similar state?—Yes; Clement's-lane is a sample of filth and abomination.

3126. Is that also a cul-de-sac?—No.

3127. Are the houses close to each other?—The street is narrow.

3128. Is there any good system of sewerage there?—No; the sewerage is bad.

3129. Is there any system of scavengering or cleansing there?—It is sadly neglected.

3130. Is there any officer whose duty it is to inspect this district, and to give notice to the proper authorities, or to take care that the cleansing is properly done?—None that I am aware of. There ought to be a power of enforcing it somewhere; and I have long wondered that whilst in this country so much attention is paid to the protection of the person and property, so little care should be taken of the health of its inhabitants.

3131. Are you aware that the neglect of some sanitary regulations which would tend to promote the health of the poorer classes, is a cause of great expense to the richer classes?—There can be no question about it, and it is also a source of great dissatisfaction on the part of the poor with regard to those above them in authority.

3132. In consequence of the illness arising from the neglect of such regulations, do you conceive that a great burthen is frequently cast upon the poor rates?—There is no doubt of it; and also upon the hard-working surgeon. I am sure I give away from 100 *l.* to 200 *l.* every year to sick persons, and I cannot help it, as I am compelled to have those cases come under my notice.

3133. A great cost is also incurred in dispensaries and hospitals, and all other benevolent institutions, that have for their object the relief of the poorer classes when out of health, is there not?—Precisely so; and I was about to say, I take this view of the question, that although these places are good establishments, yet a great deal of disease is caused by the neglect of sanitary regulations, and this neglect is a source of expense that might otherwise be saved. There is one point I wish to advert to particularly, with respect to Drury-lane; from Queen-street (I know nothing of the ground plan there), but I think from Queen-street opposite Long Acre, we have no sewerage; the consequence is, that the excrementitious matters are pumped up, and they pass of course on the surface of the gutter; now while these gases are quiescent, little harm is done; but the instant they are mixed with the air, it is breathed by the inhabitants, and becomes noxious, and of course highly injurious to health.

3134. Now with regard to the evils arising from burial-places in the midst of the

the dense population of London or other large towns, have you made any particular observations upon that?—Yes, I have paid rather particular attention to that.

3135. Will you give the Committee the result of your observations?—I think it is very easily provable, that bodies have been placed, by some system of management, which at present I cannot understand, in spaces utterly inadequate to contain them.

3136. Do you apprehend that the health of the inhabitants in vicinities close to burying-grounds has frequently been injured?—I do.

3137. By the effluvia arising from the decomposition of bodies in these burying-places?—I think so, and no conservative power of constitution can resist it.

3138. Can you state any particular cemeteries or burying-places near the locality that you are best acquainted with, from which such evils arise?—I know very many, in every one of which that evil exists.

3139. Will you mention a few?—There is Enon chapel, in Clement's-lane, Strand, that is a Particular Baptist meeting-house.

3140. Is that in a populous district?—Yes, surrounded with numerous inhabitants.

3141. Will you mention another?—There is the burying-ground of Portugal-street, Lincoln's Inn Fields.

3142. Any other?—There is one in Russell-court, Drury-lane, which is excessively full; and there is another in St. Martin's-in-the-fields, in Drury-lane.

3143. Where is that situated?—That is to the left, on the eastern side, that is, a little way beyond this court I have been describing.

3144. Are there any other?—Yes; in St. Giles's, and in many other parishes, they are in the same condition; I have examined and described more than forty of them in a work entitled "Gatherings from Grave-yards."

3145. Mr. *Cowper*.] Have you any proof of the injurious effects of these church-yards?—Yes, abundance of proof.

3146. Of what character?—Of death arising instantaneously, and deterioration and depreciation of health.

3147. *Chairman*.] This is not your own individual opinion, but the concurrent opinion of most medical men, is it not?—No; it is not an universal opinion, there are some of a different opinion.

3148. But although there may be difference of opinion as to the evil to health arising from these exhalations, there can be no question as to their being disagreeable and unpleasant to the inhabitants of that vicinity?—Yes; and more than that,—they are decidedly injurious to health.

3149. Then although persons may differ about the one, they cannot differ about its being excessively unpleasant and noxious to the inhabitants to have smells of that kind arising?—No; but life may be destroyed without any smell being perceptible.

3150. Is there any other point upon which you can give evidence referable to sanitary regulations beneficial to the humbler classes in large towns?—I have spoken of the sewerage being very deficient in my neighbourhood; another point is the deterioration of the water. There is a police station-house in Pickett-place in the Strand, and I was called upon some time ago to attend a family who were just arrived from the country; I had some reason to suspect that there was some generally acting cause, for of upwards of 40 individuals living in this station-house, scarcely one of them could be pronounced to be in good health. I instituted some inquiries; made an examination, and found that the pipe conveying the excrementitious matters from the two upper floors ran parallel with and within a few inches of the pipe bringing up the water that supplied the whole of the building. This water was of course drank, and employed for washing and cooking. I requested a little water to be drawn for me when pumped up; the smell was exceedingly offensive; dissolved excrementitious matters were easily distinguishable.

3151. There was a deterioration of the water from this filthy stuff then?—Yes; it was dropping, in fact, into the cistern; I went and examined it, and found the pipe was about four inches and a half in the bore, and in a most wretched state.

G. A. Walker, Esq.

26 May 1840.

3152. Then do you attribute the illness to this cause?—I do; but I should say that has since been amended; I was there two or three days ago.

3153. Is there any other point you can direct the attention of the Committee to, connected with this inquiry?—I think the proximity of the cabinets d'aisance to the water-butt is a great cause of disease, because these gases pass off, and then they become absorbed to a certain extent. And I would also beg to state in general terms that the mortality in Clement's-lane has been very great.

3154. Can you state what it is in reference to the population?—Yes, at a rough guess I think there are 70 houses, and giving 10 persons to each house, that would be 700 persons, and the mortality has been four per cent. from fever of various grades. There were 41 deaths within 18 months.

3155. That is one in 25, is it not?—Yes; the mortality in this particular lane equals that of the worst district in London, the Whitechapel, and that is calculated from all the causes of death put together.

3156. Independently of the deaths caused by fever, were there not also in that district many cases of persons whose health was injured, and whose forces and powers for industrious purposes were very much lessened, in consequence of the fever?—Most unquestionably; and I have no doubt that a vast portion of the poverty and destitution that exists arises from the combined operation of many causes of disease, that under a good system of medical police would not be permitted to exist.

3157. Does the practice of drinking ardent spirits prevail much in those low districts?—It does; and that is one point I would wish to touch upon: many persons take stimuli from various causes, and one vastly exciting cause is the condition of the air they breathe.

3158. Do you not conceive that in the neglected localities you have spoken to, in which dirt and disease prevail so much, that these poorer classes frequently fly to spirits as a temporary resource and refuge as it were from the evils around them?—Yes, constantly. They are smitten by an invisible agent, the bad air they breathe; there is no question that that is one vast cause.

3159. Then these neglected points to which the Committee have adverted, is in one respect the cause of their spirit drinking, and then the spirit drinking becomes in its turn a cause of disease and neglect?—Unquestionably.

3160. Mr. *Cowper.*] Do you mean that the infected atmosphere has a depressing effect upon the people subjected to its influence?—Yes; it involves the necessity of taking something as a stimulant.

3161. *Chairman.*] These neglected districts have among them a great number of children, have they not?—A very great number.

3162. Are there any schools there?—There are.

3163. For the younger children?—Yes.

3164. Are there any play-grounds appendant to those schools?—Not one of them has a play-ground; that is a sad piece of information I am sorry to give.

3165. Is it not almost absolutely necessary to the developement of their strength and the spirit and energies of youth, that they should have some place of exercise?—There is no question about it. I have seen in my neighbourhood 18 children in a room, perhaps not more than 12 feet square, and that too over a receptacle for old bones.

3166. Was the air close and noxious?—Of course it was.

3167. And injurious to the health of the children? Unquestionably; Enon chapel has been employed as a school-room, and the children have met there over the bodies of the dead, which have been piled up to the ceiling of the cellar beneath; the ventilation is bad, and the rafters supporting the boards of the floor on which these children stand were not covered with the usual defence, lath and plaster.

Veneris, 29° *die Maii*, 1840.

MEMBERS PRESENT.

Mr. Baines.	Mr. Slaney.
Mr. Cowper.	Mr. Tufnell.
Mr. Greene.	Mr. Vigors.
Mr. Ingham.	Mr. Walker.
Mr. Mackinnon.	

R. A. SLANEY, ESQ. IN THE CHAIR.

Henry Maunsell, M.D. called in; and Examined.

H. Maunsell, M.D.

29 May 1840.

3168. *Chairman.*] YOU are a Physician, resident in Dublin?—I am.

3169. You have been long resident in Dublin?—Yes; I have been all my life, except four or five years while I was abroad or in the country.

3170. You are now resident in Dublin?—I am.

3171. Have you turned your attention to sanitary regulations affecting the state of the great body of the humbler classes in Dublin?—I have, a good deal.

3172. Have the goodness to state what is the condition of the working classes in Dublin, with regard to the construction of their dwellings; are there in the parts of Dublin inhabited by the humbler classes a considerable number of them living in close courts; courts from which there is no exit?—There are a considerable number; but, perhaps, not so considerable as in some other large towns in England and Scotland.

3173. Those courts are chiefly of an old construction?—Yes; almost altogether.

3174. Are those courts built in such a way that the houses are near each other, and there is no possibility for a thoroughfare of air?—Very many of them are exceedingly narrow, and the houses very high; they are four or five stories high.

3175. The form of those courts is one which prevents that free circulation of air which is necessary in a great measure for dryness?—It is so.

3176. Are there within those courts any cellar dwellings?—Very frequently; in a great majority of cases there are cellar dwellings.

3177. When you speak of cellar dwellings, do you mean below the surface of the ground, and where the earth comes up to the exterior walls, so as to render it damp?—That is almost invariably the case.

3178. There are no areas?—None, in the older part of the town, chiefly occupied by the poor.

3179. No windows, so as to allow of a thorough draught of air through them?—I may almost say never any window in the rear, and no means of light except by the door.

3180. Are those cellar dwellings so situated in close courts, as you have described, very unhealthy, from their dampness and closeness, and want of ventilation?—Exceedingly unhealthy.

3181. Are there below the level of the floors of those dwellings any sewers to take off the filth?—I would say, that in those parts of the town where the cellars are inhabited in that way, there are very seldom sewers calculated to carry off the filth.

3182. It is impossible to carry off any damp from the floors of those dwellings, in consequence of the want of sewers?—Just so; very frequently they are obliged to have pumps for the purpose of removing refuse water.

3183. Is not such a construction very injurious to health, and likely to produce disorder?—I should say it is.

H. Maunsell, M.D.

29 May 1840.

3184. Are you cognizant of fevers prevailing among the population inhabiting those cellar dwellings?—Yes, I am aware that they do prevail very extensively in such dwellings.

3185. You stated that there were not so many of these, as there are in some other towns you are acquainted with; are the houses in those courts, in addition to being so close to each other, and having cellar dwellings, in many instances built back to back?—They are, or with exceedingly small spaces between them and other houses behind them.

3186. So as to prevent a thorough draught of air passing through them which might in some measure do away with the evil of their being built in close courts?—Yes, quite so.

3187. Such a form of construction, both in those close courts, and in cellar dwellings, back to back, must be highly injurious to the health of the persons who inhabit the dwellings?—Exceedingly so.

3188. Is there any Building Act in Dublin, laying down any regulations to prevent such construction, or any construction which is found to be injurious to health?—There is not any Building Act applicable to Ireland at all, that I am aware of; there are local Acts, but which are not at all effective.

3189. Are there any local Acts which have provisions of that nature?—No, there are some slight provisions in the local Paving Act; they have power to purchase and take down buildings for widening passages.

3190. Those provisions are not for prevention?—No, only for improving, and they are quite inoperative; they have no funds. There is another board, called the Wide Street Commissioners, who tax the inhabitants; they have done a great deal of good in Dublin by removing buildings in inconvenient sites.

3191. They have no power to make regulations to prevent such constructions as may turn out to be injurious?—I am not aware of any.

3192. With respect to the system of sewerage in that part of Dublin which is inhabited by the poorer classes, what is the state of the sewerage?—It is exceedingly imperfect; I have brought with me a map containing a scale of the sewers. (*Producing the same.*)

3193. Referring to the map before you, which you know to be an accurate one, can you state whether, in many parts of Dublin in which the poorer classes reside, the sewerage is imperfect?—It is very imperfect; there appear to be a great many lines marking sewers, but they are very imperfect, and very imperfect in their connexion with each other.

3194. Are there many close courts and narrow streets, inhabited by the humbler classes, in which there are none, or very imperfect under-ground sewers?—There are; the majority I should say.

3195. In many of those places there is nothing but a surface drain?—Yes; or a drain very little below the surface, so as not to give the means of drawing off the wet from the cellars.

3196. In those districts in which there is nothing but a surface drain, is it constantly attended to and inspected, or is it frequently neglected?—It is frequently much neglected; probably, under the Police Act, it is better attended to; we have now a metropolitan police.

3197. Have you visited districts inhabited by those poorer classes, in which you have perceived evils arising from the want of a system of inspection?—I have been in the habit of visiting them; and since I was aware I was to be examined here, I have visited a great part of the poorer part of the city, and examined into it.

3198. What is your opinion, after that supervision, of the poorer parts of the city; is it that it is neglected and wants further provisions, or that it is pretty well attended to?—It decidedly wants new provisions; it is exceedingly neglected.

3199. From your medical knowledge, and your knowledge of the localities, can you state that great evils to the health of the poor arise from those circumstances?—I can.

3200. Do you give a decided opinion upon that subject?—Yes; and if the Committee will permit me to state the grounds on which I arrive at that conclusion, I will do so.

3201. In your inspection, and looking into the localities inhabited by the lower classes of persons, what did you observe to be the case with respect to the conveniences for accommodation and decency to the lower classes; are they

they attended to or not; are the privies or ash-holes kept in order?—No. A great many houses have no privies at all; a great many of them have privies on the stairs, or in the lobbies, the house being inhabited by a great number of persons. There is often no yard or place for throwing filth of any kind, and frequently the whole of it is thrown into the streets. In other instances there is a privy in the lobby.

3202. In cases where it is in the lobby, in the way you have spoken of, is it neglected or periodically cleansed?—I should say it is never cleansed till it is impossible to go on without removing part of it, and then only part.

3203. Does great evil result to the inhabitants from the noisome stench and dirt arising from those causes?—Very great evil indeed.

3204. With respect to the receptacles for dirt and ashes, and the refuse arising from houses of this class, are there any regular and proper receptacles provided, and are they periodically cleansed and kept in order?—No, they are not at all.

3205. Where the refuse is cast into the courts or narrow streets in which they reside, does it lie there for a considerable time before it is swept and carried away?—It does very frequently. I do not think there is any regular system of removing it in the poorer streets.

3206. Is the consequence a noisome smell and stench to the inhabitants?—It is very much so.

3207. Is that very injurious to the health of the inhabitants?—I should say it is exceedingly injurious.

3208. Will you state the results of the observations you have made upon those points?—The only way in which I could get any specific information was by taking two or three of the public charities, the fever hospitals and sick poor institutions. I got the number of patients admitted by them during a month, and then I ascertained from what streets they came, which streets I inspected. I visited Cole-alley, containing about 28 inhabited houses, several of which were let in tenements. The alley is perfectly straight, and open at both ends; it is not very narrow; it is tolerably well paved, but full of filthy refuse from the houses. The street itself is of sufficient width. Two or three houses have fallen in the street, and the spaces which those houses have occupied are full of filth; the straw beds of the inhabitants are thrown into them.

3209. There is no periodical cleansing of those places?—There is none that is efficient; there are four or five other spaces throughout the alley, caused by the falling-in of buildings, which are occupied as dung-yards and receptacles for the filth of the neighbouring dwellings; one of those yards is walled in, and has a gateway, but half the gate has been carried away, so that all who please have access to the yard; it is filled with cow-dung and fæces, and all sorts of filth; straw that has served the purpose of bedding, and other filth, which is left in a semi-fluid state. In several of the houses there are dirt-holes, used as privies, at the foot of the stairs, there being no passage from the house backwards; in others there is a small covered yard behind, into which the filth of the house is thrown; very commonly the halls or passages leading to those receptacles seem to be used as privies for the inhabitants; the most abominable stench proceeds from all those accumulations of filth; there are no cellars or under-ground stories to the houses, all of which are in a ruinous condition. Off that street there is a small square closed off, surrounded by buildings, having six separate entrances and stairs, the former of which, as well as the generality of those belonging to the houses in the alley, have no doors. This yard is called Gill's-square; it is approached by a covered passage or gateway, in which there is a fountain, the only supply of water available for the inhabitants of the alley, for whose purposes it is not sufficient. Quarrels frequently take place about the water; the waste water from the fountain flows through an open gutter into a sewer in the yard, consequently the covered passage is kept constantly wet, and littered with animal and vegetable remains of matters which have been washed at the fountain. At the time of my inspection a woman was washing fish, the offal of which covered the passage, and was not likely to be removed. In one corner of the square there was a dirt-hole, which serves as the common privy for all the inhabitants. On inquiring at the Cork-street Fever Hospital, which is the hospital for that district, I found, that of 1,006 applications for admission during the month of

H. Maunsell, M.D

29 May 1840.

January in the present year, 119 were from Cole-alley, and 24 from Gill's-square; that was one-seventh of the whole.

3210. Is one-seventh much greater than the due proportion of fever applications from that district, with reference to the population?—Infinitely greater.

3211. If that be the case, do you attribute the much greater number of fevers there to the dirt, filth, and neglect you have spoken of?—Yes; I can attribute it to no other cause.

3212. Are there any other districts which you have examined in the same way, in which there are a considerable number of fever cases, and which you attribute to the same causes?—Yes, there are; with regard to that street there were 22 cases furnished by one house in a month, and by another 21; those were not the whole number of sick in that street, but only those who applied to that one hospital.

3213. Mr. *Cowper*.] Do you suppose the new lodgers caught the disease of those who had been in it before?—I think it is impossible they can avoid catching it, for it is occupied by mendicants; they lodge together 10 or 12 in a room, and it is impossible that fever should not spread in such places; the hospital that I have spoken of, though its application is chiefly to the locality, has no restricted district, but there is a dispensary from which the poor are attended at their own houses, which has a district. In this institution there were 1,570 patients from the whole district in the month of March; out of those 95 came from this street.

3214. Is that more than the proportion of that locality?—It is very much more than its proportion.

3215. Are there any other neglected localities in which the same dirt and filth and so forth exist, and in which the same kinds of evil prevail?—Yes, there are many; as an example I may mention another small street which has cellars, Rainsford-street; it is in the same condition, with the addition of cellars.

3216. Are those cellars filthy?—They are very filthy; many of them have been lately closed up in consequence of their being flooded; during the cholera the parish interfered and absolutely ejected the people and closed up the cellars.

3217. Have any of those cellars been re-opened?—Yes; the people have again gone into them.

3218. Is there any drainage below the level of those cellars?—There is no drainage below the level of the cellars; from that street the applications to the fever hospital during the month of January were 61 in 1,006.

3219. Is that much more than the proportion of the population?—Very much.

3220. Does that arise from the same causes as apply in the former case?—Yes.

3221. Will you proceed to another case?—In Robert-street, which is a very short street, not more than six or eight houses, there were nine applications to the fever hospital; that was precisely in the same condition; in Thomas-court there were 19 in the month of January; all those being much out of proportion.

3222. Without going into minute particulars, are there many other localities of a like nature, in which a like neglect prevails, and like effects are produced?—Many others.

3223. Is there any one which is peculiar?—There is a small district of four small streets or alleys, from which there were 23 applications to the fever hospital, which is also out of proportion.

3224. They were neglected in the same way, and the quantity of fever arose from the same cause?—Yes.

3225. Are there many others of the same kind?—There are a great many streets of the same kind.

3226. Can you state the average cost in each case of fever to the community?—I cannot at the present moment.

3227. Is there any doubt that the aggregate expense arising from the numerous cases of fever occurring in Dublin is very considerable?—I have no doubt it is very considerable.

3228. Are many of those cases of the working classes?—Very many of them.

3229. Can you state the period of duration of those cases, one with another?—I cannot

—I cannot state that exactly; but I should think the average is 14 days, at least.

3230. During that time the person is unable to work, and his family are deprived of his services?—Yes.

3231. Therefore, there is not only the expense of his maintenance cast upon the public, but the loss of his wages to his family during that time?—Yes; and the result of his family being paupers, and a burthen on the community.

3232. His family become in some way or other chargeable to the community?—Yes.

3233. Is not fever a disorder of that nature that health is often prostrated for some time after the party returns from the fever hospital?—Yes; that I consider perhaps the greatest evil of all. The person is cured *quoad* the fever, but he is dismissed without the means of support, and he becomes a permanent burthen.

3234. Do you consider that the number of fever cases arising from the state of filth and dirt, and neglect, you have spoken of, is a great cause of cost to the community, and of suffering to the working classes?—Yes.

3235. Have you ever made a calculation of the cost?—No; the means of making the calculation do not exist in Ireland.

3236. You state that the drainage is very defective in many of those localities?—Yes.

2237. What are the causes that prevent the system of drainage being carried out efficiently?—The Commissioners of Paving are empowered to construct, alter, change, rebuild, extend or enlarge public and private sewers, drains, and cesspools; the private sewers, at the cost of the owners: those powers are given by the 47th of Geo. 3, c. 109, ss. 55 & 95, and by the 54th Geo. 3, c. 221, ss. 25 & 26; but those are defective, in consequence of their having no right of entry; they cannot go into a house to ascertain whether their sewers are perfect, and they have not the funds to construct public sewers.

3238. Have they power to oblige the owners to communicate with the sewer by under-ground drains?—They have; landlords are required to provide sewers communicating with the main sewer, under a penalty of 20*l.*, by the 103d section of the 47th of Geo. 3.

3239. Mr. *Cowper.*] Is that inoperative?—It is, from their not having the right of entry; they cannot go into a house to ascertain whether the sewer is made or not, and they have not funds to oblige the landlord to do it.

3240. *Chairman.*] Is that provision frequently neglected?—I believe it is always neglected; I think it is scarcely ever enforced.

3241. Mr. *Cowper.*] Could not they know the fact, whether there is a communicating drain, without the right of entry?—Yes; they have the right of opening the street to ascertain that, but that would be a very expensive way of ascertaining it.

3242. They have no funds, you say, by which they could enforce the Act?—They have not, and they say they have too much to do in other quarters.

3243. *Chairman.*] Have they power to prevent cesspools and receptacles for filth being sunk below the level of the common sewer?—They have power to cleanse private sewers, drains, or cesspools, where they are injurious to the pavement or offensive to the inhabitants; but I do not think there is any provision to prevent their being sunk too low.

3244. With respect to that valuable power they have given them of cleansing private sewers or others, in which there is filth injurious to the public, is that enforced or acted on?—No; I made particular inquiries from the officers of the paving board, and they assured me that it was not so.

3245. Mr. *Cowper.*] How do they derive the rates for the purposes of the Act?—They assess the rates; the charges of constructing sewers are assessed on the owners, proprietors, or lessees of houses built or building. They have no power to construct a sewer in a street proposed to be built, but if it be building, or the houses be built, they may have sewers.

3246. Do you know whether there are practical impediments to the levying of that rate?—Yes, the assessment is not to extend to houses inhabited by persons so poor as to be unable to pay it; the way in which that operates is, that there are many streets in which there are perhaps three or four houses of persons able to pay, but a considerable number who are unable to pay; it is hard to assess the houses of those who can pay to make the sewer for the whole

H. Maunsell, M.D.

29 May 1840.

whole street; besides, they are confined to a certain expenditure; it is confined, I think, to 18 *l.* per perch; they can only assess any house to that amount. Then the expense of constructing the main sewer is assessed upon the street, not upon the district.

3247. *Chairman.*] Is the assessment upon the owner of the house, the lessee, or the occupier?—On the owners, proprietors, or lessees of houses; it does not appear that it is upon the occupier.

3248. Supposing the owner dwells out of the district, receiving a high rent from the poor occupiers, have they power to enforce it upon the owner?—They have the power of assessing the landlords, proprietors, or lessees, and they have also the power of obliging the landlord to register his landlordship and his own dwelling; provided the landlord vacates his house, and lets it in tenements, then they can go to him and assess upon him; but that they tell me is also inoperative; they tell me that it cannot be carried into effect.

3249. Why is that inoperative?—I am not aware, but I am told it is inoperative.

3250. Mr. *Cowper.*] Can you state of what class of persons those paving commissioners consist?—They are three officers of Government, paid by Government; Colonel Morris is a commissioner, and one of the aldermen of the city, and another gentleman; they are appointed by the Lord Lieutenant.

3251. Mr. *Tufnell.*] Does their power extend over the whole city?—Yes, all within the circular road that comprehends all Dublin.

3252. What is the general feeling of the inhabitants as to whether the powers entrusted to these commissioners are properly exercised?—I do not think there is any feeling of discontent against them, but I think that arises from their not considering the matter; the tax is exceedingly high in comparison with the rent of the houses.

3253. *Chairman.*] The inefficiency of the system appears to arise partly from want of power, and partly from want of funds?—I think they have power enough of execution, but they have not power of inspection; they have not inquisitorial power, and they are deficient in funds, chiefly in consequence of part of the city being so poor that they cannot levy the rate, and it would be unjust to levy a rate upon the better part of the town sufficient to perform all these works.

3254. Can you state what is the rate in the pound?—They are empowered to assess 4 *s.* 6 *d.* in the pound on the valuation for minister's money.

3255. What do they levy?—I am not able to state that positively.

3256. Mr. *Tufnell.*] Have there been many main sewers made of late?—Yes; there is one making just at present in one of the best parts of the town, near Stephen's-green, communicating with a sewer in Dawson-street. I am not aware of any sewer having been made recently in any of the poorer parts.

3257. On looking at the map, it would appear that on the south bank of the Liffey there is much more drainage than on the north?—Yes, there is; it is the older part of the town, the better inhabited, and more wealthy; at least, the south-eastern part of the town is the most improving at present.

3258. In levying the rates, they can levy them only on the inhabitants of the street in which the sewer is made, not on any streets which branch off?—No. The way in which it operates is this: if the inhabitants of a street wish to have a sewer, they apply to the paving board, some individuals of them; then the commissioners have power to convene the inhabitants of the street by public summons. But though they may convene them to meet and consult about it, and have the power of enforcing their compliance, they seldom do it, unless there is a majority in favour of it. Then it can only be rated on the inhabitants of the individual street, not the branch streets.

3259. Supposing there is a street running at right angles, along which the sewer does not go, but which may communicate with that main sewer, that is not assessed?—No; merely the houses in the street in which the main sewer is, and houses which communicate by cross sewers with the main. They complain that they cannot assess the whole district. At the commencement of this Act there were 40,000 *l.* granted from the Consolidated Fund, half of which was applied to the construction of sewers, and there would not have been so many but for that grant.

3260. Can you state what is the sum annually expended by the commissioners?—No; the accounts are not made public; they are only furnished to the Government.

3261. The burden you state to be considerable?—Yes; I occupy a house which is valued under the New Poor Law at 65 *l.*, and my paving-rate is about 7 *l.*; it includes the paving, lighting, and cleansing: the care of the sewers, not the making new sewers.

3262. *Chairman.*] That does not include the police rate?—No.

3263. That is upwards of 10 per cent.?—Yes.

3264. Mr. *Cowper.*] Have this Board any efficient power of scavengering the streets?—Yes, they have full power to scavenge the streets.

3265. How do they perform that duty?—They perform it very well in the streets occupied by the better classes, but very ill in the streets occupied by others.

3266. Do many of the sewers lead into the Liffey?—No, the tide rises in the Liffey above the sewers, and many of the houses which had sewers have none now in consequence of the inconveniences which they suffered from the Liffey flooding the lower part of their houses.

3267. When the tide is low, is not there a very great stench from the river? Yes; it is a very great nuisance; there is a great deal of mud laid bare by the falling of the tide.

3268. Is that caused by the sewers emptying into the river?—Less by that than by the putrefying matter which is deposited there.

3269. *Chairman.*] Those putrefying animal and vegetable matters must be deposited there?—They are carried up by the tide from the shipping, and carried down in the course of the river, and have accumulated there.

3270. There is no provision to prevent animal and vegetable matter being cast into the river?—Yes; that is under the care of the Ballast Board; they can punish persons for depositing them there.

3271. Are those regulations duly enforced?—I think they are, but the accumulation is occasioned very much by matters coming down the river.

3272. Mr. *Cowper.*] Do you think the state of the river at low tides is prejudicial to the health of the city?—I think it is very much so.

3273. Mr. *Tufnell.*] Do you conceive the evils which arise from the want of drains affect only the lower classes, or the classes above them?—I think they affect the lower classes chiefly, but the evil is communicated to the upper classes also to a considerable extent; the fevers which arise with the lower classes constantly spread, when they become epidemic, to the middling and the upper classes, but the chief suffering is in the humbler classes certainly.

3274. That is chiefly where a great number of families inhabit one house?—Yes.

3275. With regard to artizans and those in the higher classes, are infectious disorders common among them?—Yes, they suffer considerably also.

3276. *Chairman.*] With reference to the supply of water, you state that some portions of the metropolis inhabited by the poorer classes are badly supplied?—Yes, there is a means of supplying them, though not to a considerable extent; those are made operative in the liberty by means of fountains; there is no supply of water within the houses, nor any means of effecting that; on the north side of the Liffey there is an insufficient supply of water; it is not regular or constant, it is periodical.

3277. Is it sometimes deficient for a day or two?—Yes; sometimes it is not turned on for a day or two, or a portion of the day.

3278. Is the water of good quality?—No; on the north side especially, it is derived from a very filthy basin.

3279. Mr. *Tufnell.*] Are the fountains you refer to perpetually flowing?—No; some are supplied during a portion of each day; some every other day. There is a latch to enable persons to draw water, but the water has access to the fountain during certain portions of the day only.

3280. *Chairman.*] They have access to water, but the supply is not constant or sufficient?—Yes; especially on the north side.

3281. Is the deficient supply of water you speak of the cause of the want of health and cleanliness on the part of the people?—Yes; the poor have not the means of keeping a supply, in consequence of its being accessible in that casual way; they have not tanks or vessels, and that operates particularly injuriously on the very poorer classes.

3282. With respect to lodging-houses; are there many lodging-houses for the poorer classes to which a migratory population come for a few days or a night, and pay so much for the night, a number being lodged together in one room?—There

H. Maunsell, M.D.

29 May 1840.

—There are a great many; we have had a mendicity institution, which is now nearly broken up, in consequence of the operation of the Poor Law. There were generally 2,000 or 3,000 individuals on the books of the institution; none of them were lodged there; they received 1 *d.* a night, and latterly it was reduced to a halfpenny a night: that was for the purpose of providing themselves with lodgings; they got their food in the institution. The result was, that they lodged in the most wretched places; a number of them in a single room without bed-clothes; they have no means of providing bed-clothes, nor any means of keeping them if they had.

3283. Have you, in your visitation of the poor in Dublin, had occasion to visit any of those lodging-houses?—I have.

3284. Are those lodging-houses very numerous in the poorer neighbourhoods?—They are.

3285. Are they inhabited by a migratory population?—Yes; they are remarkably migratory.

3286. Are there any regulations with respect to cleansing and ventilation, or such regulations as would be necessary to preserve the health of the inmates?—None whatever.

3287. In consequence of the want of such regulations, do fevers frequently prevail in them?—They do, frequently.

3288. Are the fresh inmates who come in from time to time liable to take the fevers that have affected the old inmates?—Yes; they constantly do.

3289. Do they carry to other localities the fevers they have taken in those lodging-houses?—Yes; there are a number of remarkable facts showing that throughout the records of the hospitals.

3290. Have you any doubt whatever that the neglect of proper sanitary regulations, with regard to those houses, is the cause of great cost to the country?—I am quite certain it is; and that a small expense in carrying sanitary regulations into effect, would save a great deal of money to the country.

3291. Is there any regulation with respect to the cleansing or the whitewashing of those lodging-houses?—There are none ordinarily.

3292. Are there any at the present period?—None now in operation; there are extraordinary means.

3293. Does your knowledge of that part of the subject extend to other towns in Ireland?—Yes, for the extraordinary means I speak of are not of a local nature.

3294. Do you know whether the lodging-houses in other large towns in Ireland are neglected in the same way?—Yes; they have means of paying attention to them, but only of an extraordinary character.

3295. Arising from the cholera, or other visitation?—Not from the cholera, that required a special Act; but under the 58 Geo. 3, c. 47, if any fever or contagious disorder prevails in a district, the magistrates can convene a meeting, and apply to the Lord Lieutenant, and he can commission 13 persons to act as a board of health for that locality; then they have extraordinary powers; but a fever or contagious disorder must exist in the locality to justify those steps; this Act is applicable, not merely to Dublin, but to the whole of Ireland.

3296. When the fever arises to such a height and intensity as to threaten the habitations of the richer classes, this Act is put into force?—Yes.

3297. But in ordinary times, when the fever is not of very great intensity, and is confined to the dwellings of the humbler classes, there is no such provision put into force?—No, but then there is another provision which may be put into force; this Act provides, that "whenever in any city, town, or district, any fever or contagious distemper shall prevail, or be known to exist, it shall and may be lawful for any one or more magistrates, upon the requisition of five respectable householders, to convene a meeting of the magistrates and householders of such city, town, or district, and of the medical practitioners within the same, in order to examine into the circumstances attending such fever or contagious distemper." There is another Act of 59 Geo. 3, c. 41, which enables the parishes to appoint officers of health; that is a permanent power; those officers have very considerable authority; they can assess a rate.

3298. Are they appointed?—They are appointed, I think, in all the parishes of Dublin except two; but they are inoperative; they are unpaid, and it is a very disgusting duty; they can be made to serve, but there is no control as to the amount of service they perform; so that the provision is quite inoperative, unless an alarm exists.

3299. Do you not think the appointment of some such officers, properly appointed,

appointed, properly paid, and having reasonable power, for the purpose of suggesting and enforcing such measures as shall be beneficial, would be highly valuable?—I am sure it would, and it would save an amazing quantity of expenditure to the country.

3300. Do you not think, that whether appointed by the poor-law guardians or the rate-payers, the appointment of such an officer would soon pay its expenses by the saving it would occasion?—I think so, if he was under proper control.

3301. Do you not think the appointment of a board of health, consisting of a certain number of persons properly appointed, either by the poor-law guardians or the rate-payers, as a board to receive the report of the inspectors, and make suggestions, and communicate with the proper authorities, for the purpose of carrying out new regulations, would also be a valuable provision?—Yes, I am quite convinced of that.

3302. Such a board would have the power of reporting annually, either to the Government or some superintending authorities, the state of health within their district, and, in case of emergency, calling for extraordinary assistance; and also state what they had done for the improvement of the public health; do you think that that would be a practical and good method?—Yes; in fact that system does exist at present; it is shadowed out at present, but it is not operative.

3303. Does any mode suggest itself to you in which it might be rendered operative?—Yes; it could easily be made operative with a little management; the 58 Geo. 3, c. 41, sanctions the appointment of a board of health when disease is known to be in existence; it was extended by the Cholera Act to the apprehension of disease; that Act has expired; but by a sort of fiction they say that contagious and epidemic diseases always exist, and there is accordingly a sort of central board of health kept up in Dublin, which costs the public something; but we know nothing of the operation of it; it publishes no reports; it is not useful except as it is applied to by the Government; by a very few alterations in the constitution of that body it might be connected as a central and general board with local boards, capable of being put into operation under this Act; it might be made very useful without perhaps any additional burthen to the country.

3304. Mr. *Cowper.*] What are the alterations which appear to you to be desirable?—I would give the central authority a controlling power over all local boards so as to make them operative, and cause it to be composed of persons capable of exerting themselves with authority, and understanding how to exert themselves.

3305. *Chairman.*] Would you extend this power to the suggestion of measures for the prevention of contagion?—I would make it preventive and not remedial; not occasional, but permanent; I would alter its powers materially; I think the boards under those Acts have powers which are ineffectual from their very extent.

3306. Mr. *Cowper.*] Does the Board at present consist entirely of medical men?—It does not; there are three or four medical men upon it.

3307. Mr. *Tufnell.*] Is not the New Poor Law brought into operation in Dublin?—It is brought into operation in Dublin within the last month.

3308. How many unions are there in Dublin?—Two.

3309. How many medical men are there?—There is a physician, a surgeon, and an apothecary to each.

3310. They of course, from the nature of their duties, are more in the habit than any other medical gentlemen of knowing and ascertaining the state of the poorer classes?—There is no relief given under the Irish poor law, except in-door relief, so that they know nothing of what occurs but in the poor-house. There are others, who have been attending local dispensaries, who have more local knowledge. Besides, those gentlemen have scarcely come into office yet.

3311. Would they not be, from the nature of their duties, more in the habit of ascertaining whether there are any disorders prevailing among the lower orders than others?—I believe the gentlemen employed would be very likely to give a great deal of information, in consequence of their having been connected with dispensaries, but not as connected with the workhouse.

3312. Where any contagious disorders were prevailing, there would of course be a greater pressure for relief from the workhouse?—So far as that goes, very probably.

H. Maunsell, M.D.

29 May 1840.

3313. *Chairman.*] Their duties would of course lead them into communication with the humbler classes?—No doubt they would.

3314. Is there any other suggestion you have to make with respect to sanitary regulations applicable to the poorer classes of the inhabitants of Dublin?—They have very considerable powers in the Paving Board to prevent accumulations of filth, but which are inoperative, in consequence of the want of some authority with inquisitorial powers.

3315. Mr. *Tufnell.*] Supposing you consider any inspectors necessary to be appointed, it would be desirable to connect them with the board of health, would it not?—My opinion is that it might all be done by means of a board of health; that that should be rendered an inquisitorial body, mediating between persons creating nuisances and those who are to punish them. I do not think the board of health ought to have the power of punishment, but of determining whether nuisances do exist, and then communicating with the proper authorities. If they had the power of obliging the Paving Board to do its duty, very little alteration would be required.

3316. *Chairman.*] Are there any nuisances of any kind injurious to health arising from particular manufactories in the vicinity of Dublin, to which your attention has been attracted?—Unfortunately we have scarcely any manufactories there from which nuisance can arise. There is a good deal of nuisance arising from accumulations of dung and manure, and also from slaughter-houses. There are 10 markets, or collections of shambles, in Dublin, besides separate butchers' shops, at almost all of which animals are killed.

3317. Is some improvement requisite with respect to the cleansing of those markets?—There is. I think there ought to be public abattoirs, removed from the town, and that a board of health should have the power to ascertain the amount of the nuisance, and to devise the means to remove it.

3318. There are many accumulations of filth and dirt in the neighbourhood of Dublin; and, among other things, the state of the slaughter-houses, in your opinion, is injurious to health?—Yes.

3319. With respect to cemeteries in the midst of populous districts, are there any in Dublin which you consider injurious to health?—I think they ought to be all removed; but there is no very great evil in that respect in Dublin. There was a burying-ground near the outside of the town, at which no fees were paid, and which was consequently so much used as to be a nuisance; that has been closed up since the cholera occurred, and there are no burials in it; there is nothing like what occurs in London. There are 23 churches with burial-grounds and vaults, and a few Roman-catholic chapels; but I can mention no fact showing that that is a very crying evil; it is curing itself. There are three or four burial-grounds established at the outside of the town by companies, and the Roman-catholic clergy have established two or three.

3320. Are there any baths in Dublin, calculated for the poorer classes, to which the price of admission is small?—No, there are no such things.

3321. Are you acquainted with the state of Belfast, Limerick, or Cork?—I think all those towns are pretty much in the same circumstances; some of them very remarkably so.

3322. From your knowledge as a medical man, it appears to you that they stand in need of legislative measures?—Yes; there are very strong facts showing that. Drogheda, I think, was exactly decimated by the cholera, which was a very extraordinary proportion.

3323. Have you a return of the number of persons affected with fevers in the district of Belfast or Limerick, or Cork?—No; there are no such returns. That is one of the things which ought to be remedied.

3324. Did you visit, when you were at Limerick, what is called the English town?—I did.

3325. Did you go to that part inhabited by the poorer classes there?—Yes; it is seven or eight years since I was in Limerick; but it struck me as in the most miserable state. The Irish part of the town, called Garryowen, was the most miserable I ever saw.

3326. Is there any return of the mortality of Dublin generally?—No; we have no bills of mortality.

3327. Would the Population Return show that?—No; there has not been a census since 1831; the populaton in Dublin, inside the circular road, was, in 1831, 232,262.

3328. Are there any other suggestions of a preventive nature relative to the subject before the Committee that strike you?—I think we want very much a Building Act, with some provisions for the arrangement and the prevention of buildings that would be injurious, and also for the construction of sewers; we want alterations in the mode of doing that, and also in the supply of water. There is one matter concerning the supply of water in Dublin which is very defective; it is under two authorities: the Paving Commissioners have the control over the fountains, and they have the power of opening the streets; but the supply of water is under a committee of the corporation, who cannot, without leave of the Paving Board, open the streets to repair the works.

3329. Mr. *Tufnell.*] What is the difference between the city and the liberty?—They are supplied in the liberty from a different source; they are supplied by works constructed by the Government; they are much better supplied with water than the others; the liberty is not under the jurisdiction of the Lord Mayor and corporation, but under the jurisdiction of the seneschal.

3330. Do you think that the provisions of the Building Act should be general and applicable to large towns, in which there are a great number of the dwellings of the poorer classes?—Yes; I think the provisions should be such as to make as little interference with private rights as possible; and it appears to me essential there should be authorities, such as a board of health, capable of performing those inquisitorial and mediatorial duties which I have stated to be requisite.

3331. You state that you think the regulations ought to interfere as little as possible with private rights; do you think they should be adequate for the prevention of those forms of construction of buildings which are shown to be injurious to health?—Yes.

3332. So as not to interfere except in cases where it is absolutely necessary?—Just so.

3333. Do you not think it essential to prevent cellar dwellings being constructed which are without areas and without windows?—Certainly.

3334. Do you not think it would be necessary to prevent small houses being built back to back, so as to prevent their ventilation?—I do.

3335. Do you not think it would be necessary to prevent their being built in close courts through which the air cannot pass?—Yes.

3336. Do you not think there ought to be some proportion of width of street as regards the height of houses, so that the space in front should be either the whole height, or one half or one-third of the height of the house?—Yes, otherwise no regulation would be operative; a street would be of a sufficient width for houses not very high, which would be quite insufficient for the higher class of houses.

3337. Do you not think a regulation of the same kind of a space proportioned to the height should be also enforced with respect to the width of the opening at the back of the house as well as in the front?—Certainly.

3338. Those regulations, and the laying down rules to prevent the construction of houses without such rules, would, in your opinion, be highly beneficial to the poorer classes of the community in point of health?—Yes; and to all classes of the community.

3339. Do you not think the slight interference which would take place with regard to the construction of dwellings would upon the whole be highly advantageous to the community?—I do; the only difficulty is laying down general rules; and that is the reason why I think it essential there should be some mediating body, such as the French Conseil de Salubrité, in some degree to interpret the law, and to modify it.

3340. The Committee have had the evidence of builders of great experience, that houses are now divided into different classes, and that such regulations might be laid down as might be easily enforced with reference to the lower rates of houses, in which the poorer classes reside; are you aware whether there are any divisions as to the rates of houses amongst the builders in Dublin?—No; building is almost stopped now; it has not been at all active for some years in the lower houses; the poor now occupy houses formerly occupied by the rich.

3341. If such rules could be established and enforced in this country, would there be any difficulty in enforcing the same in Ireland?—I cannot conceive of any difficulty likely to arise; I am sure that all thinking persons would see the necessity of such regulations.

H. Maunsell, M.D.

29 May 1840.

3342. With regard to some of those close localities, consisting of old houses built in the forms you have spoken of, much neglected, and in which fevers prevail, do you contemplate any mode by which they might be opened, so that the air should pass through them?—I think it would be a very legitimate way of expending public money, either by assessment or from the general funds of the country; that in the end it would produce a saving.

3343. Do you think that, from the evils arising from the want of some such improvements, great cost falls upon the community?—I am quite sure of it.

3344. Do you think it would be just to make the community at large pay a part of the cost?—Yes; I think there are some places where the locality could not bear the expense.

3345. Suppose, from any public fund, the Government were to offer to pay one-fourth or one-fifth of the estimated expense for such an improvement, do you think the locality might bear the rest?—Yes, I think it could; but that must be again left to some controlling power, lest it should be converted into a system of jobbing.

3346. Do you think the principle of Government furnishing a certain quota, and the locality furnishing the rest, might properly apply to such a case?—Yes, and I think the evil is so general throughout the whole country, that the expense and the benefit would in the end be pretty equally divided.

3347. Is there any other mode you can suggest, by which those improvements might be carried out?—I am not aware of any other; it must be done either by local assessment or Government assistance, or probably by both combined.

3348. Mr. *Tufnell.*] Are you aware whether those powers of the Commissioners of Paving extend to any other large towns of Ireland?—Yes; almost all the large towns have local Acts; there are powers latterly, under the Act of the 9th of Geo. 4, c. 82, enabling localities and towns to combine for the purposes of cleansing and lighting and watering their precincts.

3349. Does that empower them to appoint salaried officers?—Yes, it gives them power, in order to carry those objects into effect, to levy a rate.

3350. Do you know whether those powers have been exercised in any other places?—Yes, I know they have been exercised in a small town near Dublin, Kingstown; the Act enables towns not having corporations to combine for the purposes of cleansing and lighting within their districts.

3351. You are not perhaps acquainted with any large town in Ireland which has been rapidly increasing in population?—I understand that Limerick is very rapidly increasing, and very much improving.

3352. You do not know whether the houses of the poorer classes there are better constructed than those in other towns?—No, I cannot speak from my own knowledge; I have not been there for six or seven years.

3353. *Chairman.*] Are there in Dublin many schools for the children of the poorer classes?—There are.

3354. Both day and dame schools?—Yes.

3355. Are there appendant to them any play-grounds in which the children of the poorer classes can take the exercise so necessary for their health?—No, not generally; I think there are such grounds in very few instances.

3356. Do you not think some such provision of play-grounds appendant to the schools of the younger children is almost necessary for their health?—I am sure it is absolutely necessary.

3357. Do you not think that, independently of their health, for the purpose of developing their powers of attention, it is a very great advantage to them to have exercise at the period of relaxation?—Yes, I am convinced of it; I am sure a great deal of evil is done physically and morally to children by their long confinement in schools; it is altogether beyond what they are able to bear.

3358. You think it would be advantageous to their health, and to the developement of their faculties, to have places for exercise?—Yes.

3359. Mr. *Ingham.*] In the large school of the Education Board, is there not a place for exercise?—There is a large space round it; there are several detached buildings. There is also a space connected with the Kildare-place School, but I think the children are not allowed to play there; I think there is no interval for play.

3360. *Chairman.*]

3360. *Chairman.*] Are those the only schools you are acquainted with which have large play-grounds?—I am not aware of any others.

3361. Mr. *Tufnell.*] Do you think where a family has inhabited a certain confined space for several generations, it will produce permanent effects upon the race itself?—Yes, I think that may be set down as proved to be so.

3362. You think that produces an injurious effect on the posterity of those living under those circumstances?—Yes; it produces scrofula; it produces deterioration in mind and body; I think that may be considered as proved by various observations on other animals as well as man.

3363. You think the neglected state of the lower alleys and courts has an effect on the moral habits of the people?—Yes; I am satisfied of it; I am sure that a person cannot be in a good moral state who is not in a good physical state.

3364. Do you think that if greater attention were paid to cleansing those courts and alleys, that would produce by degrees a good moral effect upon the population?—I should think so.

3365. *Chairman.*] Do you think that the neglect of cleanliness, and of the decencies of life in those neighbourhoods, has a great effect in degrading the characters and feelings both of those who are grown up, and of children who are constantly there?—It must greatly demoralize them.

3366. Supposing those children to attend schools during certain hours of the day, do you not think that the benefit they will receive from any instruction or good example there will be neutralized very much by the bad example and the evil they will see in those filthy spots when they return in the evening?—I do think so.

3367. Is it the custom of the poorer classes to inhabit cellars?—It is, very much. There are some rows of houses which have been commenced, the vaults of which were built in the first instance, but which were never finished: those vaults are squatted in by the poor, who do not pay rent for them.

3368. Are those cellar dwellings, where the houses are not finished, peculiarly liable to disorders?—I think not so much as the others, for there is a better access of air to them; they are open in front. The people themselves generally make a window where there was none originally intended, and they very commonly build a fire-place, and make an opening to give the smoke an exit. I have inquired from the officers of dispensaries as to those, and I find they have less objection to go into those than they have into the cellar of a house which is occupied above.

3369. *Chairman.*] In those neglected localities where the filth and dirt is so great, does dram-drinking prevail extensively?—Yes, dram-drinking prevails very extensively. It is now checked very considerably by the temperance movement; but it prevails generally throughout the lower classes.

3370. Do you think the neglect of decency and cleanliness has a tendency to produce that recklessness of character which leads to dram-drinking?—Yes, I think it is a great cause of it; in Ireland they have no comfort at home.

3371. Mr. *Mackinnon.*] Has not the damp of the climate a great tendency to it also?—No; I think it is the misery of the people.

3372. *Chairman.*] Do you think an attention to their comfort would have a tendency to improve their moral character?—I have no doubt of it, and that it would permanently decrease dram-drinking; it would lead to a desire for better clothes and more comforts, and they would be reclaimed from their habits of thoughtlessness.

3373. Mr. *Mackinnon.*] You say dram-drinking is the consequence, in many instances, of the misery of the people?—Yes.

3374. They fly to that as a resource?—Yes, in many instances.

3375. *Chairman.*] Will you favour the Committee with your views as to the constitution of the Board of Health?—I think the system should consist of a central and local boards, the latter being subject to the control of the former. All should be permanent, not occasional nor contingent, as they are at present in Ireland; their objects should be preventive, not remedial. With regard to the constitution of the board, the central board, I think, should consist both of persons of the medical profession and others, and a portion of them, I think, should certainly be paid. On the board, I think, there should be one member accustomed to chemical investigations; there should be a person acquainted with mechanics and physics, a sort of engineer, and there should be perhaps two medical men, one of whom should be selected as a practitioner, and one

H. Maunsell, M.D.

29 May 1840.

as a scientific physiologist and anatomist. I think those four would probably constitute a sufficient paid portion of the board, and there might be unpaid members, equal perhaps in number or perhaps greater, as it might be thought right, consisting in some degree of official persons; the chief police authority for example, (in the French system, the prefect of the police is the chief of the board,) the chief poor law commissioner, the chief commissioner of public works, the chief authority of the military medical department; those might be unpaid, as they are paid at present for other services; there might be added to them a certain number of non-official persons, citizens or persons not engaged in any public office.

3376. Would you contemplate those being chosen by the rate-payers?—I should say the central board ought to be appointed by the Government. I think there should be attached to the board a secretary, who should be a medical person, employed in the duties of the board, and not allowed to practise as a medical man. A difficulty arises as to the mode of paying these; but it is not insurmountable; there is at present a board which is paid something. I think there should be a fee for each attendance at the board perhaps once a week. I think the board would be required in the course of its operation to send commissions for the purpose of inspecting localities where nuisances were supposed to exist. They should be paid for those in the shape of fees, in the nature of costs. Suppose a manufactory was said to injure the water of a river, the person holding that manufactory, or the person prosecuting, whichever proved to be wrong, should be made liable to costs, of course regulated. One source from whence to obtain the necessary funds would thus be opened. With regard to the local boards, I think they might be established by the inhabitants of a district, and elected as the poor law guardians are; but that they also should have a paid secretary, who should be a medical man.

3377. Mr. *Mackinnon.*] Is it necessary to have machinery so expensive as that of the general board?—The object is a general one, and incapable of being pursued with any benefit, unless it is pursued on a general system. With regard to the funds, they might be got without any burthen, and rather with a saving. There are some funds provided for the present central board; the fees of commissions would furnish a fund, without drawing upon the public purse. For the local boards at present an assessment is permitted, which assessment, when any terror invades the inhabitants, becomes a very serious thing. In Dublin, on the occasion of the cholera, there was an assessment of about 30,000*l.*, one-third of which would, in my opinion, have effected the object much better if otherwise applied.

3378. *Chairman.*] If the measures had been preventive, you think a smaller assessment would have effected the object much more economically and beneficially to the inhabitants?—Yes; there is a costly job constructed the very instant that there is any emergency. I am convinced that if we could compare a regular preventive assessment, during the last 10 years, with the contingent and irregular assessments which have been actually made during that period, that we should find a very serious balance against the country, owing to the adoption of the latter mode. There is another way in which funds might be procured without increasing the public burthens. There is a good deal of money at present taken from the counties by assessment to pay medical men, who perform the duty of medical witnesses on coroners' inquests. I think that duty might be performed by the secretaries of the local boards; it might be part of the duties for which he was remunerated, and by that means there would be a saving. With respect to the duties of the central board, those, I conceive, should be the superintendence and instruction of local boards, the construction of sanitary reports from the materials to be regularly furnished by local boards; one part of the country is not compared with another, and the reports lead to nothing but confusion and error at present. Such boards should have the superintendence of epidemic and quarantine regulations; they should be confidential and responsible advisers of the Government on any measures necessary to prevent disease.

3379. Do you contemplate that they should make up returns of the comparative mortality of different towns or districts?—Yes; I think they should make up returns of the state of health in the districts.

3380. Have you any such returns at present in Ireland?—No, there are no returns at all, except private ones. I think a part of the board's duty should also be the formation of such commissions as I have mentioned, to report on nuisances dangerous to the public health, and also by what means the Building Act

Act could be carried into effect without being rendered oppressive. For example, it would not answer to lay down any general rule as to the distance at which a house should be built from the bank of a river; what would be an evil in one set of circumstances might not in another; and there should be some mediatorial authority to determine in such a case, and to modify the law. Also in questions of nuisance, with which the time of the public courts are frequently occupied, say the smoke of a manufactory, if there are a dozen medical men examined, there may be six on one side, and six on the other, according to their prejudices and whims; now if there were such a board as this, capable of sending down a commission, the matter might be better determined on the report of such a commission, which should be made evidence, and the expense of the commission be charged as costs. Then this central board should be a court of appeal from the decisions of the local boards. With regard to local boards, they should have the duty of inspection, and of reporting to the central board, and the charge of investigating all matters likely to affect the general health within their district. With regard to the powers of the board, I think they should be rather mediatorial and inquisitorial than executive; they should have control over local boards so far as to enforce uniformity of operation and performance of duty on the part of the board and the officers of it; they should have power to form commissions, with right of entry and inspections, under suitable limitations, and power to oblige the executive to do their duty in all matters regarding the public health. The local boards should also have inquisitorial powers, a right of entry and of demanding returns of health from medical practitioners, some allowance of remuneration being made for the same.

3381. Such powers as would enable them to carry out the measures you have stated?—Yes; they should be available in carrying out the provisions contemplated, and perhaps a registration of births and deaths, if it was thought necessary. The districts for the local boards, I think, should be determined, perhaps, by the poor-law divisions.

3382. Mr. *Mackinnon.*] Your opinion is decidedly in favour of a central board; that would be an expensive sort of machinery, would it not?—I think it would not, with the views I have put forward.

3383. Would not a local board, appointed by the parishioners, or the authorities of certain districts, serving gratuitously, be able to answer all the purpose, without the expensive machinery of a central board?—No; we have in former years found that they are not so operative; there are local boards; it is possible to erect them under the 58th and 59th of Geo. 3, but they are not operative; there is no information derivable from them.

3384. How are they appointed?—The officers of health are appointed by the vestry, and the boards of health by the Lord Lieutenant.

3385. Do not those central boards very often end in jobs, from the persons who are appointed not having the power to exert themselves over the whole community?—The local boards are, I think, much more likely to job.

3386. How can they be more likely to job, assuming that they are formed by the parish authorities, consisting of two medical gentlemen and two other gentlemen, their duty being to point out what nuisances ought to be removed, they having no salary, and having only the object of benefiting their neighbourhood?—I think their having no salary is the very reason; you cannot expect persons to perform that sort of duty without payment.

3387. We have unpaid magistrates?—Yes; but that is different from the performance of a dangerous duty, which must be paid for in some way or another; most men shrink from the performance of such a duty, for which they are not responsible if they are not remunerated.

3388. Do you think that all the local boards ought also to be salaried boards?—No.

3389. *Chairman.*] In the local boards you do not contemplate any being paid except the secretary?—No.

3390. It was only the central board of which you thought a portion should be paid, because they would be persons of peculiar qualifications, a chemist, a mechanic, and so on?—Just so.

3391. Mr. *Mackinnon.*] It appears that the power you would vest in the central board, would be so great as to constitute it a very powerful engine?—No, I do not contemplate any very extensive powers.

3392. You propose that they should have great powers in case of nuisance?—That

H. Maunsell, M.D.

29 May 1840.

—That they should send a commission, and that their report should be received in evidence, but not that they should have further powers; the object is to attain good evidence.

3393. Is it not your opinion that that board being salaried, and having great powers of abating nuisances, would be extremely unpopular in the country?—No; it would not have the power of abating nuisances; I desire to prevent its being unpopular by an excess of power.

3394. You would have the central board exercise a superintending power over the local boards?—Yes, I am of opinion that they would never do their duty without that.

3395. Suppose that in a populous district a local board was appointed, consisting of two respectable medical gentlemen and two respectable individuals not in any profession, do you not think that the wish to benefit the neighbourhood would induce those gentlemen to visit any district and to point out what was desirable?—They must have knowledge as well as will, and that would not be gained without its being pointed out to them by some central authority; and in addition to that, the interference with one's neighbour is a very obnoxious duty, and one which a person will not perform without being called upon to do it.

3396. *Chairman.*] You think, though there might be some objections to the power given to such a board, that some board applying itself to the prevention of contagious disorders is necessary?—I do; but I am anxious to remove any misconception with regard to the board; their powers should be as little as possible executive; that, I think, would remove the great objections to such a board.

Mr. *Thomas Cubitt*, called in; and Examined.

Mr. *T. Cubitt.*

3397. *Chairman.*] YOU have been very largely engaged as a builder in the metropolis?—I have been.

3398. You are acquainted not only with the buildings calculated for the richer, but also with those calculated for the humbler classes of the inhabitants generally?—I am.

3399. Does your information extend beyond the metropolis, or chiefly to London?—I have seen very little of country places; I have spent the principal part of my lifetime in London.

3400. Are you well acquainted with the districts in which the poorer classes reside in the eastern parts of London?—No, but I know generally something about London, having been upwards of 30 years in business, which has led me occasionally into all parts.

3401. Are you aware that, in any districts in which the humbler classes reside, there are particular forms of houses which are objectionable, many being built in close courts, with the entrance under an archway, the houses being near together, and there being no opening at the end?—Yes, I am aware that there are many such, which I think is a matter certainly to be regretted.

3402. Do you not think such a construction of houses is injurious to health?—Decidedly; I think such a construction of houses is injurious to health, and I think it is exceedingly dangerous in cases of fire. I noticed particularly that there were many places of that kind in Birmingham, which appeared to be in a very bad state.

3403. Are you aware that where those houses are placed so close together, in many instances they are also built back to back, so that there can be no thorough draught of air through them?—Yes, there are many such.

3404. Is not that construction of houses very inimical to the health of the humbler classes?—Most certainly; it prevents ventilation and the free circulation of air.

3405. Are you aware that there are houses of this description, where there are under-ground dwellings, where the damp soil comes against the wall forming the side of the cellar, and in which there are no windows, and the only descent by steps?—That is exceedingly objectionable; but that, I think, is not very much the case in London.

3406. Where that exists you think it objectionable?—Very much so indeed.

3407. If this sort of building in those close courts and back to back prevails in many parts of this metropolis, and still more in many large manufacturing districts, do not you think that there is required some general Building Act for the

the purpose of regulating buildings of that nature, and preventing their construction in forms which were shown to be injurious to health?—I think it would be very advantageous to regulate them, but I think that would be a very difficult thing.

3408. Do you think the enforcement of regulations relating to those lower classes of houses would not be practicable?—I think that general rules might be laid down, but it would be a difficult subject, I think, to legislate upon; I think very many buildings were intended for other purposes, but are afterwards converted into the dwellings of poor people; afterwards they get into the hands of proprietors who try any mode of making a profit, and probably find that the most productive. The building may have been constructed for a different purpose, for which purpose it might have been fit, but may be altered so as to become exceedingly injurious to the people who live in it. Then, again, if you create too great difficulties as to poor people's houses, they will be obliged to incur other objections, perhaps by living too close together. Anything which tends to increase the rent is objectionable; poor people's houses seldom belong to any but those who are glad to get any money they can; they belong to a little shopkeeping class of persons, who have saved a little money in business; as they advance a little in life they possess themselves of that sort of house.

3409. Mr. *Tufnell.*] It is seldom that a person of large capital builds these sort of houses?—I think very few persons of great capital have anything to do with them at all.

3410. *Chairman.*] The observations you have made have reference to buildings constructed for other purposes, and then turned to this particular object; do you not think that some regulations should be made as to those provided for the habitation of the poor?—Yes, but even that is a difficult thing; I think it would be very difficult to say that a person shall not build a single house or two houses, because houses are built very commonly in fields, and where it is not known that any houses will be built at all; but where a second house is built there, there ought to be a decided plan exhibited, which would show that that house is intended to have at least two fronts open, and that no other house should come near either the back-front or the fore-front; that there should be an open space and a sufficient width in forming streets; and I think those parts that form the openings to them should be thoroughfares, and that they should not be less than a certain width. I should be inclined to go further than most persons as to streets: when land is first appropriated to building it is of very little value, and it might be so arranged, without hardship to anybody, that it should have a good width of street; some persons suppose that the lower classes of houses require only a small passage; it is true they do not require large openings for carriages, but there ought to be a large space for circulation of air, and more particularly because they are not so cleanly in their habits.

3411. The principle you have spoken of, of securing a certain portion for air, you think ought to be attended to in a well considered Building Act?—I think so.

3412. You have stated that the houses of the humbler classes are chiefly in the hands of, and built by persons who have tried to make the most they could of their property?—Yes, persons of small capital.

3413. Is it not therefore the more necessary that there should be some regulations to prevent their making the most of their property in such a way as to be injurious to the health of the community?—Yes, I think that is very desirable.

3414. There are certain regulations at present in the Building Act, for making party-walls of a certain thickness to prevent fire, and to prevent over-hanging buildings?—Yes.

3415. Those are interferences to a certain extent with property, for the good of the public?—Yes.

3416. Carrying out the principle you have spoken of, would only be carrying that further which is already commenced in respect of buildings by the present Building Act?—Yes, I think there ought to be an Act to prevent a mass of small houses being built close to each other, but the difficulty I feel is as to measures to prevent the converting houses and buildings intended for other purposes, I mean houses built, perhaps, for warehouses or manufactories,

Mr. *T. Cubitt.*

29 May 1840.

factories, which are frequently turned into dwellings for poor people; but I think with reference to taking care of poor people who cannot take care of themselves, and who must get into such places as they can obtain, the great point is to protect them against the nuisances of their wealthy neighbours, the great manufactories and gas-works, from which London is suffering very much at all times.

3417. Do you not think that some regulations, to enforce, in the vicinity of the localities inhabited by the poorer classes, a good system of sewerage and cleansing, so as to carry away the filth and dirt and offal occasioned by those crowded localities, are absolutely necessary?—Yes, it would be very desirable that that should be done. I think that the streets should be wide and airy, even for the very poor houses. Then I think there should be a positive law to ensure a hard surface being made for the road, and a good drainage along the line; then the nuisances in the courts might be easily cleared away. Then I think it would be good economy if there were a perfect system of scavenging established, beyond what those poor districts could afford to pay for. I think it would be good economy if London generally paid the expense of scavenging, so as to insure the habitations of the poor being kept clean; and if the water were allowed to run from the waterworks at certain times, which would be a further expense, that would tend to ensure the cleansing of the gutters and channels. But the places where they have a difficulty in collecting the rates are very little attended to. There is soft vegetable dirt left near the surface, which becomes a sort of soft sponge to receive all sorts of bad matter, generating new gases. Animal or vegetable matter is not thrown off and cleared away. I noticed that particularly last year in Manchester, I think, worse than in many parts of London, and in the neighbourhood of very wealthy manufacturers.

3418. Do you think, from your knowledge of the working classes inhabiting those neglected localities, that they feel the evils arising from these causes?—I am not quite sure whether they feel them, so as to be fully aware of them; they are conscious of them to a certain extent. Many of the lower orders are off, as soon as they get any money, to public-houses; they get, in a great measure, in a state of stupefaction to get rid of many of their uncomfortable feelings. Probably the best way to improve the morals of the people is to provide them good places to sleep in.

3419. You think that those places are highly injurious to the morals of the people?—I think so.

3420. Do you think they are injurious to the health of children?—There cannot be a doubt about that.

3421. Mr. *Tufnell.*] You think it would be difficult to draw up an Act to provide for all these matters?—Yes; I think so. Many years ago I thought that an Act to provide for making the streets of a certain width, and having in the courts a width of 40 feet between the houses, would be very easy; but I am convinced, from consideration, there are difficulties in the way.

3422. *Chairman.*] You think that the chief difficulty is to provide for the case of buildings which are altered in their construction, and become the residences of the lower orders?—Yes; if a better class were provided for the dwellings of the poor, that would have an effect upon the dwellings of those descriptions, for they would get a higher rent for those more convenient. I am only afraid of increasing the difficulty of those people getting houses, which would tend to put them close together.

3423. Do you not think it follows from the vast increase of population in the manufacturing towns, the neglected state of many of them, and the great extent of illness arising from those causes, that some provisions are absolutely necessary?—I think that some provisions of the nature adverted to are exceedingly desirable. I observed some years ago a measure brought forward for providing the poor with airy places for taking exercise. I think that would be very important; I think the want of such places drives people into public-houses, where they corrupt each other, because they have no place in which to take exercise. I think that would be a most important thing for London.

3424. Mr. *Tufnell.*] Can you indicate any spot in London which might be used for that purpose?—I can hardly put my finger upon any spot, but I think it would be highly useful; I think it would be economy for the richer classes to provide

provide them, for it would render their own habitations more healthy if they provided them.

3425. *Chairman.*] Did you see the Report of the Committee proposing six spots, which were all at that time available for the purpose?—I think I did; but I do not think that went far enough.

3426. You think that the same would be desirable in other towns?—Yes; I think in towns which are extending greatly, or likely to extend, such places should be provided.

3427. Mr. *Cowper.*] Do you think that in a Building Act it would be desirable to provide for the width which the street should bear in proportion to the height of the house?—I have thought so; but, on further consideration, I am afraid that a house would become like a slave ship, with the decks too close for the people to stand upright; they would put the floor and ceiling too near, and rather than occasion that I would say that no street should be under a certain width; I should say not less than 40 feet.

3428. Mr. *Tufnell.*] Suppose it were intended to build a row of houses, would you not suffer them to be built unless there was a sewer provided?—I would not allow a house to be built anywhere unless it could be shown that there was a good drainage, and a good way to get rid of water; I think that there should be some public officer responsible for that; that there should be surveys of every district, so that the officer should be aware whether the sewers were provided or not; I think there should be an officer paid at the public expense, who should be responsible for that; I think they should not be appointed by the district; there should be no favouritism of that kind; but public officers, changed from point to point, to take care of all public nuisances; with respect to manufactories, here are a great number driven by competition to work in the cheapest way they can. A man puts up a steam-engine, and sends out an immense quantity of smoke; perhaps he creates a great deal of foul and bad gas; that is all let loose; where his returns are 1,000 *l.* a month, if he would spend 5 *l.* a month more, he would make that completely harmless; but he says 'I am not bound to do that,' and therefore he works as cheaply as he can, and the public suffer to an extent beyond all calculation. I look upon it it has this effect: a gentleman comes to London, and lives in London; I will suppose he fits up his house in the best style he can; he has a taste for good pictures and upholstery, and so on; after a time the smoke has destroyed them, and he is disappointed and annoyed, and the effect is he is brought down in his feelings in a degree from the state in which he was accustomed to have things.

3429. Mr. *Tufnell.*] No regulations can prevent the smoke of the atmosphere?—If I were obliged to prevent my steam-engine sending out a quantity of offensive smoke, I should soon find a means to do it, and it would be no hardship upon me if my neighbours were obliged too.

3430. Mr. *Cowper.*] Are there means for effecting that?—Yes; look at those little steam-boats passing continually; imagine the quantity of sooty matter they are throwing into the town, and the great injury that is done to furniture. Some persons will say that is good for trade. I deny that; the only way to encourage the manufactures is to preserve them, and I think it would be a salutary act to prevent all those steam-boats showing any smoke at all; and if a law were passed to prevent any steam-boat showing any smoke out of the funnel, or to a very slight degree, we should not see fewer boats than we now see.

3431. Mr. *Ingham.*] Are you not aware that there are Acts in the large towns to compel the owners of steam-engines to consume their own smoke?—Yes; but there is no person compellable to put that into force. There was an action brought six or seven years ago against one of the great gas-works that happened to be in a neighbourhood where the evil was felt; there is no doubt those people proved that the neighbourhood was suffering very much by it, but the wealthy gentlemen, the gas proprietors, could bring evidence quite sufficient to overset that again, because there was wealth against poverty.

3432. *Chairman.*] You think the present law is not efficient, and that an efficient system of inspection by public officers should be provided, and that the expense might be very well paid by the public, in consideration of the benefit which would be derived?—Yes, I think that the cost would not be large; that the cost would be nothing compared with the good it would do.

3433. Mr. *Greene.*] You said there would be an increase of expense if very strict

Mr. *T. Cubitt.*

29 May 1840.

strict regulations were laid down with respect to the mode in which poor people's houses are built, and that that would drive them to congregate in great numbers together in each house?—That is my fear.

3434. Would greater evil result from a number of persons congregating together in one house in a broad street, than at present exists in a smaller number of persons in a house in the wretched condition in which those persons are now living?—I do not think that would be so bad; but that is one of the objections I have to the strict rules I should like to see established.

3435. The houses in which those persons mostly reside are generally owned by persons of small property?—They are frequently.

3436. Would there not be a considerable difficulty in laying down regulations with regard to 40 feet in width, where it would interfere with the disposal of small properties?—I speak of a case where new buildings are to be erected; I would not allow any new buildings to be erected unless there was a clear 40 feet.

3437. You would say that the man who built the first house should have a right of building his house as he pleased?—Yes, to a certain extent.

3438. The second man would fall under your building regulation?—The first man should be bound to have an open front at least.

3439. *Chairman.*] Those regulations have been proposed with reference to cities of above a certain population; in such situations there can be no doubt regulations are necessary?—Seeing how fast places do grow up, I think that there should be a very small population to begin with to constitute the necessity for a law.

3440. Mr. *Tufnell.*] From the experience you have had of London and other large towns in the country, are you of opinion that the habitations of the lower classes in London are better or worse than those in other places?—My experience hardly goes far enough to enable me to answer that; but I fancy that the working classes in London are better provided for and in a better state than in some towns. I think the working classes have improved in my time; I think they are more moral than they were; I think they are not so much addicted to drinking; that there are more sober workmen to be found; that there is less difficulty in finding a moral and sober body of workmen than formerly.

3441. Do you think it would answer, in a pecuniary point of view, supposing you had a certain piece of ground to lay out in building, that you should get a better description of tenant by its being well drained and well laid out, than on the plan now followed?—I am not sure; if I were building a class of houses which I never do build, but where a great number are wanted, I do not think it would pay to make them in the way I should like to do, for my neighbour would come alongside, taking advantage of my large opening; if I took a certain quantity of land, and built a street such as I should like, giving the houses good openings, the contiguity of that ground would be immediately wanted, for the people would have my piece to walk through, and a place of air for their children; it would be a general point, the same as a square is in the better parts of London.

3442. *Chairman.*] If the regulations were general, so that they were obliged to do that generally, that would take away that temptation?—Yes, it would, and therefore I think it would require the regulation.

3443. Mr. *Tufnell.*] Are you of opinion that the system of copyhold tenure has a tendency to deteriorate the class of houses built?—It has some effect, perhaps. Speaking of copyhold, I feel it would be a very good thing for this country at large, if any mechanic, or any one of the poorer classes who could save a little money, could make himself quite sure of buying a bit of freehold land; I feel that if a man having 100*l.* or 50*l.*, were he able to buy a piece of freehold land, on which he could put his house and garden, not only in London but in country places, and he could get his title cheap, it would give that man a sort of standing and firmness in the country, which would be a great protection against any plotting or mischief; the poor man, or some part of his family, would become a prudent man; he would be encouraged to make an effort which he sees no cause for now.

3444. With regard to a person building a number of houses; supposing the copyhold tenure did not exist, and the ground were freehold, would he not be likely to build a better description of house than now, when the fine must come into his calculation?—A man takes that into account in making his calculation.

I should

I should consider whether it would pay me at all building on a copyhold; most of London is built on long leasehold. An arrangement takes place between persons rather better off than the occupier; but I think it is rather a disadvantage to the working population of London that everything is leasehold. I think it would be a good thing if in every parish throughout England there were certain lands appropriated for that purpose, where a man might buy, but not exceeding a certain quantity.

3445. *Chairman.*] One of the difficulties of the humbler classes now arises from the great expense of law conveyance, the stamps, and so forth, which are more in proportion to a small purchase than to a large one?—Yes; what is desirable, particularly with reference to that point, is, that there should be a title ascertained, and a man should have the liberty of taking a part from it at a small expense, a small piece of land sufficient to build a house and make a garden, in those districts not worth perhaps 30*l.* an acre.

3446. Mr. *Cowper.*] Have you, in the course of your experience, found any deficiencies in the practical working of the Commission of Sewers?—Yes, I have found very great difficulty.

3447. Do you think they want any additional power?—I think that a great part is wrong; the plan of our sewers is not right, good as they are in some respects. I think that the officers of the sewers ought to be all responsible officers, and that it is wrong to drain direct into the Thames. I think none of the drainage in London should be carried direct to the river, but pass to the east of London; that none of the sewers should empty themselves into the river in front of the buildings. I would keep the water clean.

3448. *Chairman.*] Have you seen Mr. Martin's plan?—Yes; I do not consider that that goes far enough.

3449. His plan is to remedy the evil, and not to prevent the evil?—I think there ought to be some great lines now cut from the west to the east, in which the water, by travelling about eight miles, would go as far from London as it does now by its circuit round the river; perhaps it would require 15 miles to meet that point; it scarcely ever meets it; the noxious matter is carried all along in front of the town; it does not go the shortest way; it cannot get away, and it has so far to go, that the tide meets it and drives it back again. I think it ought to be let out beyond the River Lea. I will give an instance of the bad effects of this: there are a great many buildings going on beyond Paddington, the water from which is drained by the natural drainage, the brooks of the country; they happen to run westward, and the dirty water from Paddington is carried out to Chelsea. It is a long way before it gets to the river, winding about among the thickly inhabited parts; then after running through Chelsea, it has a long way to travel before it can get its discharge; it is blocked up, so that the tide meets it, and the water that leaves is comparatively clear, having deposited the foul matter.

3450. Mr. *Cowper.*] Do you think there would be any inconvenience in giving the Commissioners of Sewers a power of enforcing communications from private dwelling-houses to main sewers?—No man is obliged to make a drain to his house; so far they want power; but if a person does make a drain, they have the power of seeing that that is properly done; but a man may make a depôt for filth, if he likes; he may build in a hollow place, where no sewer can reach him.

3451. *Chairman.*] There is no power of preventing the digging down below the level of the common sewer?—No.

3452. Mr. *Cowper.*] Do you think it would be desirable to give the power of enforcing communication in all cases?—Yes; I should go the length of providing a sewer that would carry off everything, and I would prevent a person making cesspools above the common size; 50 years ago nearly all London had every house cleansed into a large cesspool; all the filth was stopped in that cesspool, which had to be carried away afterwards; the water was allowed to drain itself from that. Then the river did not receive so much damage; a person did not injure his distant neighbour as he does now; but then the town became one mass of corrupt matter; a vast deal of it always escapes, wherever it can escape. Now sewers having been very much improved, scarcely any person thinks of making a cesspool, but it is carried off at once into the river. It would be a great improvement if that could be carried off independently of the town, but the Thames is now made a great cesspool instead of each person having one of his

Mr. *T. Cubitt.*

29 May 1840.

own. Mr. Martin has proposed a plan for saving the manure, but I have not seen it noticed anywhere. The great difference is that this manure used to be saved, and it is only latterly that it is thrown away. Formerly there were places round the town called laystalls, such places as scarcely exist at all now; there were a great many where the soil was deposited, of course making the whole neighbourhood very unwholesome. I believe there are many such places now in the neighbourhood of large towns, in the country.

3453. Do you think that the officers of the Commissioners of Sewers do not perform their duty at present?—I think the officers are generally very able and efficient and diligent persons; there are always some men on the commission that are very attentive, and work it out very carefully; but if there is a particular scheme to be carried on, the Board of Sewers being composed of a great number of persons, many of whom have their own business and cannot attend to that of the board, the room is filled on a particular occasion so that the persons who have a real interest in working the thing have very little control; if there is anything to be done, they may be beaten by numbers who come and object to works intended for the improvement of certain places, and the prevention of injury to the public; persons having no information may go and vote against those who have. I think the sewers should be under the control of impartial persons.

3454. You think, probably, the commission should consist of a smaller number?—Yes; I think that the largeness of the number increases the evil.

3455. *Chairman.*] Do you not think, with reference to some of the large manufacturing towns, that it is necessary to give some facility to the establishment of a good system of sewerage by a general Act, which should enable them, under general regulations, to appoint commissioners, so that a good system might be laid down and carried into effect?—I think so.

3456. At present some of the large towns have no efficient system at all which can be carried into effect in the towns or their suburbs, and it is necessary to have a specific Act of Parliament for every particular case, which is the cause of great expense and delay?—I think as the population increases those provisions are much more necessary. It is a subject of very great difficulty; but I think that all those difficulties are to be got over.

3457. Mr. *Tufnell.*] Do you think it desirable to have a central board in London, laying down plans, and who might control the district commissioners?—I hardly know how that could be done; but I think there should be responsible officers, and that there are certain powers wanted. Suppose a person having land, say two miles from any part of London, wanted to make that into a suburb, to appropriate it for building-land, probably there would be no means for his making a sewer through his neighbour's land; his neighbour might interfere with that, or the public road might be so situate that it might prevent it; there is no fund from which the means of making a sewer could be supplied.

3458. At present there are seven districts of sewers round London, are there not?—I do not know; I have not had to do with many of them.

3459. *Chairman.*] Your opinion seems to be strongly, that however difficult the regulations in a well considered Building Act, and a Sewerage Act may be, from the vast increase of population, the necessity of some regulations is pressed upon the public attention, and you think it proper that Government should enforce them?—I do; I think that men who have leisure to attend to it could not possibly devote their time for the benefit of the public in a way which would be more useful than that.

Jovis, 4° die Junii, 1840.

MEMBERS PRESENT.

Mr. Brotherton.	Mr. Slaney.
Mr. Greene.	Mr. Vigors.
Mr. Ingham.	Mr. Walker.
Mr. Mackinnon.	

R. A. SLANEY, Esq. IN THE CHAIR.

George Alfred Walker, Esq. called in; and further Examined.

G. A. Walker, Esq

4 June 1840.

3460. Mr. *Mackinnon.*] YOU are a medical man?—I am.

3461. You have written a book on the subject of the burial of the dead in large towns, have you not?—I have.

3462. You have turned your attention a good deal to that subject?—I have.

3463. In the book you have published, you have mentioned the evils arising from the want of ventilation in places such as cul-de-sacs?—I have.

3464. Have the goodness to state to the Committee generally your observations upon that subject?—I have little to add in addition to what I have previously stated. There is a cul-de-sac in the neighbourhood of Drury-lane, to which I have previously referred. In that court I was called upon to visit four children who had measles; I found them recovering from the eruption, but suffering with symptoms of typhus, complicated with sub-acute inflammation of the mucous coat of the intestines. The place in which they lived is one of the worst in the neighbourhood, being a cul-de-sac called Wellington-court, leading out of Drury-lane on the north-eastern side, approached by a long and narrow passage, most disgustingly dirty, without drainage, and inhabited by characters of the poorest description; the houses appear as though they were never cleaned or whitewashed, and the abominations called filthy are here in abundance. One cause of the gradual though sure deterioration of health had been long in operation, and this, I think, upon inquiry, will be found amongst the poor to be present very generally, viz. the filthy condition of the privies. In this court there is no sub-surface drainage; the substitute resorted to here is one extremely likely to be the least efficient. Instead of the excrementitious matter being carried off, it is suffered to collect in the hole immediately under the seat until it reaches a certain height, when it is conveyed by a pipe into a reservoir, which when full, is in the same manner prevented from overflowing by another pipe communicating with a larger reservoir, in the middle of which is a tub pierced with gimlet holes, so as to allow the fluid to separate from the solid portion; into this inner tub the pipe, connected with a pump, enters, and the fluid has been pumped up by the nightman. One person who lived here used to mix up the excrementitious matters deposited during the day to a consistence with water, and then pour it out on the surface-gutter in the court. No provision being made for the passage of the solid portion, as might be anticipated, all the reservoirs have long since been full; and the two pot de chambres being covered over by boards, the one immediately under the seat of the privy is constantly overflowing; indeed, frequently the soil has forced itself between and through the boards, and has repeatedly been a foot deep on the floor and in the yard. Two children recovered; the other two were in succession attacked; one affected with gangrene of the mouth successively lost the whole of the upper lip; the lower jaw was laid bare inside and out, and the roof of the mouth destroyed; petechiæ now appeared, and the child, a most loathsome object, died. The mother now removed into another house in the same court, with the idea of benefiting the other child, a girl, who was in a similar state. This infant, about 12 months old, had, when the boy died, ulceration of the hard palate, denuding the bone and laying bare the alveolar processes all round. It was similarly intractable with the boy's, and successively destroyed the whole roof of the mouth, perforating the palate bones, and eventually opening a communication between the mouth and nose by the mortification of all the intervening parts. The nose was next attacked and removed; the upper lip, detached from its adhesion to the jaw, fell down, and was only prevented from separating itself from it by a small portion of yet sound skin at the angles of the mouth. The lower lip was next affected, and in an incredibly short space of

G. A. Walker, Esq.

4 June 1840.

time was nearly destroyed, when death relieved the poor little creature from its sufferings. It is impossible for language to express in too strong terms the horrible spectacle presented to the eye by the poor child, its face hardly recognizable, scarcely human, smelling most insufferably; its hands were almost constantly employed in picking piece by piece away of the remaining portions of the face; yet in this condition was it applied to the breast of the mother.

3465. To what do you attribute that dreadful disease in the child?—However the disease might be produced, unquestionably it would be much increased by the bad air and want of ventilation; it was almost impossible to enter the house.

3466. Do you attribute it in part to want of drainage?—Yes, to the combined influence of both; there has been a great mortality in that court.

3467. Have you any other particulars to state on this subject of ventilation?—I have nothing to add, I think, to what I have stated previously. An efficient Building Act is much required.

3468. Will you favour the Committee with your opinion respecting drainage?—I may state in general terms, that our neighbourhood is excessively ill-drained. Crown-court, in Little Russell-street, Covent-garden, is the property of the Duke of Bedford; and there, I am sorry to say, the excrementitious matter is pumped up, and flows down the centre of the court. There are many other places. I would mention a second-class house in Stanhope-street; a man named Fairbank, who has resided here two years, has, during that period, been affected with sickness; he is in general good health, but he cannot keep his food on his stomach: "as for myself, (says the wife) I am much affected in my head with giddiness and violent pain; my child is a year and a half old, and is troubled with sickness. I feel convinced it is from the drain, he is so much better when he is out of it."

3469. *Chairman.*] Do you feel convinced they were right in their opinion?—Yes; they are all affected in the court. Sarah Jackson, another lodger, states this: "During the time we lived in Stanhope-street my family was much affected with sickness and loss of appetite, particularly my husband; my son Charles was so much affected that he could not take any animal food for a long time previous to our leaving the house; now his stomach rejects nothing received into it. I was very much troubled with the head-ache; it has, since I changed my residence, entirely left me; July 30, 1839." Then again, in the same house, case 3, Miss Graham writes thus: "I have resided three years in this house; I was in perfect health when I entered it; within the last two years I have been much oppressed at the chest, attended with sickness, ejecting as it were copperas water; I endure a weakness that I cannot describe; I am relieved whilst out of doors; when I return my old feelings return with me. My sister is never free from the head-ache more or less; she has sickness at times."

3470. Do you, as the medical man attending them, and knowing the situation in which they were, attribute the symptoms of which they complain to the want of drainage in the district?—I do; I am convinced that is the cause. I have taken this evidence at distinct times, without one communicating with the other; it is impossible not to attribute it to that. I will mention another instance. I have been to a house this morning in Angel-court; a family of the name of Swift lived there some time ago; not one of that family was healthy; the children had flaccidity of fibre; it will be invariably found when a child comes from the country, and enters a place where the drainage is defective, it will soon succumb; this will vary according to circumstances.

3471. Is this court you mention a cul-de-sac?—No. There is another case I will take from a very respectable street, Little Russell-street, Covent-garden: "Ann Salt entered the service of a lady in Little Russell-street, Covent-garden; the drain in this house had long been in a most offensive state. This young woman, aged 20 years at the period of her entering this house, was in a firm state of health, had compact muscles, a red lip, a cheerful mind; during many months she was exposed to the action of a poison passing off from the water-closet. As she lived in the kitchen, and indeed slept there, she would of course be exposed during the greater portion of the time to its influence; her health gradually diminished, until at length her strength became so reduced that her sisters removed her in a coach to their lodging in Bear-yard, Lincoln's Inn Fields (this place is in a most offensive condition); I was called to see her, and for some weeks the issue was doubtful; she had a most peculiar appearance of the entire skin of the body. It is my decided opinion that the drains are an immense source of disease.

3472. Mr. *Mackinnon.*] Are there any other particular cases you would mention?—Every addition to the atmosphere is decidedly injurious.

3473. Your opinion as a medical man is, that the state of the sewerage in parts of London is most defective, and that it generates the state of disease to which you have referred?—Yes, and many other diseases, by whatever name they may be called.

3474. And that having houses built in the shape of cul-de-sacs is most injurious, by preventing the circulation of air?—Unquestionably.

3475. Your opinion is, that there ought to be further legislative provisions?—Decidedly; I think it a very hard case that a poor man, without knowledge or judgment on his own part, should come into a locality, not knowing that there are causes constantly operating to depreciate his health; he may get out of it as he can; but frequently a saving of sixpence a week will induce a man to remain; his means may not enable him to remove; he is thus perhaps the creature of circumstances, over which he has no control.

3476. You have no doubt of the loss of life, and disease generated, by the want of drainage in this town?—I have no doubt of it; it is cause and effect; and it is not merely the loss of life, but it is a serious matter to many in the vicinity who feel the effects.

3477. Is it your opinion that it ought to be prevented, on account not only of the physical but the moral effect it has upon the community?—Unquestionably. If you expose children or adults to degrading influences, you must inevitably deteriorate their moral character; there will be constantly a struggle between moral propriety and physical necessity.

3478. Does not the putrefaction, arising from want of sewerage, generate a desire to drink, or to have recourse to spirituous liquors, from the low feeling it creates?—That is certainly the case.

3479. Are there any circumstances you can call to mind confirming that opinion?—I think that the grave-diggers as a body would confirm that. They generally drink.

3480. Mr. *Greene.*] How is the excrementitious matter removed from privies, such as you have described in those courts?—That is generally taken away by nightmen, frequently in the night; sometimes the excrementitious matter is mixed with water and poured out on the surface gutter of the court. Such things are calculated to demoralize any one, or any set of men. From the end of Queen-street, opposite Long-acre, to the first sewer in Drury-lane, the excrementitious matter which is frequently pumped up from two houses there runs on the surface; when I have passed that way, I have smelt a filthy smell from the water-closets of these two houses.

3481. How is the solid matter removed?—In carts, or in some instances it passes on the surface of the gutters into the drains.

3482. Is there not a certain degree of generation of foul air produced by the removal of those filthy deposits through the streets?—No doubt, and it must produce the most injurious effects.

3483. Even the carts passing through adjoining streets must have an injurious effect?—Unquestionably; we have to bear it in the night as well as the day; according to the law they are not to do this until it has struck twelve o'clock, but many persons are obliged to be about after that; and whether they be in-doors or out, it can matter little whether these agencies be put in operation before or after the hour of twelve.

3484. There is a liability to this being thrown over into the street, and a great deal of foul air generated?—Yes. I may mention a case of a family in Crown-court: one woman had seven children at one time affected with typhus, and she attributed it to the abominable stench she was obliged to live in.

3485. Mr. *Mackinnon.*] You are the author of "Gatherings from Grave-yards"?—I am.

3486. You have therefore personally examined the principal burying-grounds of the metropolis?—I have.

3487. Have the goodness to describe to the Committee their state?—The majority of the burying-places in London, whether they be called vaults, cellars, or grave-yards, are in a very dangerous and disgusting condition.

3488. Will you state what, in your opinion, is their physical and moral effect?—I have collected irrefragable proofs of both positions; I have given abundant

G. A. Walker, Esq.

4 June 1840.

proofs of their dangerous and immoral influence; I have, since I published my work, become acquainted with many instances, demonstrating the injurious effect of masses of bodies in putrefaction; I calculate, according to the present returns of mortality, we should have at least 5,000,000 of bodies amongst us in a hundred years, taking it at 52,000 per annum. I have no question that the extent of mortality has never been fairly entered until the late excellent Act; it was matter of speculation. I have demonstrated that bodies have been placed in spaces that could not properly contain them; hence has resulted a shocking state of things; the mutilation of bodies, the destruction of their envelopes, with a host of immoral consequences and injurious results.

3489. *Chairman.*] Have you any doubt of the injurious effects of this practice?—None. Here is one instance: I speak now of the nursing of bodies in lead, in what are called vaults, in the very midst of human dwellings; it is a most injurious practice, and one that ought to be annihilated. The lead cannot confine the gas, therefore the only way to get rid of the nuisance, is to take the bodies away at once, where a sufficient quantity of good air can be found circulating without interruption. "During the demolition of the old church of St. Dunstan's, the dead in the vaults were removed. This was found to be a matter of some difficulty and much danger. Several of the labourers employed refused to continue the work. They were well supplied with brandy, and under the influence of a half-drunken excitement, they effected their removal. William Mutton, a labourer employed, within a few hours after his exposure, complained of a nauseous taste in the mouth and throat, severe pain in the chest, accompanied with a cough; his skin subsequently became of a deep yellow tinge, and extremely harsh and dry. This man was at times so affected with the effluvia, that he was compelled to support himself against the wall of the vault. In removing the body of a man who had committed suicide, the gaseous exhalation was so powerful that he was rendered unconscious for a considerable period. He invariably declared that this was the cause of his death."

3490. Do you think it was?—I should think it more than likely; I have produced a number of results in my work. I give a recent case:—"Thomas Beal, 2, Cromwell-place, Little Shire-lane, a strong compactly-made man, aged 26, has been employed as grave-digger about four years; he was engaged in the month of January 1840, in assisting William West, the beadle of St. Mary-le-Strand, to clean up the rector's vault previous to the reception of the body of a deceased parishioner, who died 27th January 1840; the vault, a detached building, is entered by steps from the church-yard; two of the men employed were sensible of a disgusting odour, which left a coppery taste in the throat. On the evening of the same day Beale had vomiting, cough, and considerable expectoration, and extreme lassitude during five or six days. Six days after this exposure he consulted me, in consequence of a peculiar eruption, which first attacked the breast, and subsequently (within two days) spread over the entire surface of the body. On the fourteenth day from the appearance of this eruption a very painful enlargement of the glands in the left axilla and the groin of the same side occurred, both of which suppurated extensively during six weeks; he has now, May 5th, 1840, the remains of the eruption over large portions of both arms." I produce this case to show an example of the same poison producing the same results, for William West, who died of typhoid fever, was affected in precisely the same manner, excepting that he had no glandular enlargement; he imprudently entered the vault soon after it was opened for the purposes of ventilation. After his return home he complained to his wife that he had a peculiar,—a coppery taste in his mouth; within a few hours afterwards he complained of pain in the head, nausea, loss of appetite, and debility; in a few days he was attacked by an eruption, which first appeared over the chest, and in a few days had covered the entire body; he remained a considerable time in a very debilitated state, and it was the opinion of his widow that it was in consequence of his imprudent exposure to the exhalations passing off from the bodies in this vault.

3491. Mr. *Mackinnon.*] Do you find, as a medical man, that this putrid effluvia, arising from dead bodies, affects all individuals in the same manner, or does it affect different individuals in a different manner?—Unquestionably the man who is accustomed to an office executes it best; grave-diggers in many localities would not be able to do their work but under the influence of strong stimulants. We may take the evidence of medical men. Every man almost engaged in dissection is affected with diarrhœa; let him leave off his dissection for a time,

a time, and he will get rid of it; if you place a man accustomed to the exhalations in the dissecting room he will be affected with diarrhœa. I was myself for three months, in Paris.

3492. Is there anything further you have to state upon this subject?—I can state other instances, but it appears quite unnecessary.

3493. You state in your work that graves are sometimes left open in this city; will you state any instance?—I think it is a most abominable practice; it is done in many instances to save time and to get space. I have one in my own neighbourhood; I examined that grave the other day; that is a representation (*producing it.*) That grave was dug 22 feet deep; it is within a few feet of the windows of the house; there were ten or a dozen coffins projecting into the grave; I have no doubt some of them had been cut through. My opinion is, that the lighter gases pass off; the heavy gases, the carbonic oxide and carbonated hydrogen, will fall down to the bottom of the grave. It is generally supposed a candle will not burn in a place of that kind, but I think a candle may be extinguished and yet life retained; I tried a candle; it was extinguished at a depth of 12 feet from the surface; I requested the grave-digger to cover over the top of the grave, and to throw the depth of a foot of earth upon it. I tried another experiment, and the candle was extinguished at eight feet. I think we ought not to have those places amongst us.

3494. What place was this?—St. Martin's-in-the-Fields, in Drury-lane; the yard is raised there even with the first floor windows surrounding the place. It is close to the large theatres.

3495. You state in your book a case in which the same poison, arising from putrefaction, has had a different effect on two individuals; will you explain that?—One was a young gentleman 19 or 20 years of age; the other, an undertaker, a very respectable man, whose name I have given as being poisoned at Enon Chapel, in Clement's-lane. The man went to a church at the west end of the town to prepare for the burial of the mother of the young gentleman; the man not being acquainted with the grave-digger, contrived to lift up the stone covering the entrance of the vault called the rector's vault; they were both prostrated on the floor by the gas; the undertaker being a powerful man lifted up and carried out the other. The two men were differently affected; one was attended by Dr. James Johnson professionally for two years, and could not retain his food; that was the elder man; he said it had been nearly the death of the young man. I do not think that the town ought to be poisoned by the dead. The other had an ulcerated sore throat, and had the best advice and many journeys and changes of air, and it was two years before he recovered.

3496. You mention gases arising out of coffins; you consider them as generated in a leaden coffin?—Yes; it is impossible to prevent it; as an atmospheric pressure under 30lbs. cannot keep it down, I do not know what can.

3497. Therefore it is impossible burying in a large town to prevent the generation of gases mixing with the air?—I think it impossible. I have seen coffins quite convex and the screws driven out.

3498. The only effectual remedy would be the removal of those burial-places to country districts, or districts where there was not a thick population?—Certainly; I do not think any consideration of money should be allowed to interfere.

3499. In proportion as the mass of dead is laid in the church-yard the gas must be increased?—Certainly.

3500. And in that proportion that must be unhealthy to the neighbourhood?—Yes; I could mention a grave-yard in my neighbourhood where a shower of rain would lay bare the tops of the coffins.

3501. Mr. *Greene.*] Are there any vaults where the gratings adjoining those vaults, and places for ventilating them, open into the public streets?—Yes; they must be ventilated or they dare not descend; they have been obliged to leave even the doors of St. Clement's Church, in the Strand, open. On Saturday the 19th of August 1839, it was necessary to open the doors of the church of St. Clement's, from the intolerable stench, proceeding, in my opinion, from the dead bodies.

3502. Mr. *Mackinnon.*] Then of course that must be very injurious to the health of the congregation attending there?—I have no doubt of that; it produces frequent faintings.

3503. Mr. *Greene.*] Are you aware that in the vaults of the church of St.

G. A. Walker, Esq.

4 June 1840.

George's, Hanover-square, and Hanover Chapel in Regent-street, the gratings open to the street?—Yes; that is a very frequent circumstance; the ventilation is indifferently performed. At Enon Chapel in Clement's-lane, there is the greatest facility for the escape of the gas into the place.

3504. Mr. *Mackinnon.*] Your opinion is that if the practice of burying in this large town is continued, in the course of a hundred years we should have four millions of dead exhaling their gases to the injury of the living?—I should think at least that, if the mortality be 52,000 annually.

3505. How long will the gas, in your opinion, remain in the coffin before it is entirely evaporated?—That would be a very difficult question to answer; I should think it might be kept there for ever under peculiar circumstances. There was an instance occurred in the church-yard at Hampstead, of a grave-digger striking by accident, not purposely, into a coffin; the body had been buried in lead a hundred years before, and the man was struck down with it; it is impossible to form any conception of the most abominable stench proceeding from the dead.

3506. You have spoken of the injury arising from the gases and putrefaction of animal matter creating those unwholesome exhalations to which you have alluded; will the putrefaction arising from the small quantity of animal matter from one human being buried do material injury?—Unquestionably, a very serious injury. There is one point which is material, the keeping of bodies in low neighbourhoods before interment; I have seen frequent proofs of the injurious consequences resulting from dead bodies being kept too long previous to interment; this ought to be remedied; the periods of burying should be diffused over the entire week. At present the poor bury almost entirely on the Sunday, and frequently if a person dies on the Wednesday, if they have not time to make arrangements previous to the Sunday following, they keep that body perhaps till the Sunday next succeeding. I have frequently known a body kept on the table or the bed in a poor man's room; perhaps he is living in that room, sleeping there, and performing all the usual and necessary offices of the family with his wife and five or six children. I have often wished for an absolute power to compel the burying of those bodies under circumstances of this nature; a child, for instance, dies of the confluent small-pox.

3507. *Chairman.*] Is there any power to order the burial of a body in such a state?—Not the slightest.

3508. Has the Coroner's Court any power?—I think not. There are other consequences which sometimes follow with respect to the dead.

3509. Mr. *Mackinnon.*] What is the longest time you have known those bodies kept?—Twelve and fourteen days. In this cul-de-sac, Wellington-court, there were two bodies in the house when the other children were attacked; there the stench was so horrible, the neighbours, Irish as they were, were obliged to complain; they could bear a great deal, but they went to the parochial authorities about it.

3510. *Chairman.*] There is no inspector who can be appealed to?—No; there are no sanitary regulations to meet the case.

3511. Mr. *Mackinnon.*] What would you suggest?—I may state in general terms, my intimate knowledge of, and acquaintance with, the scandalous and abominable practice followed in very many places of interment, compels me, however unwillingly, to say it matters little whether the body rests in a poor man's room, or putrefies on the surface of a grave-yard which is incapable of receiving it.

3512. *Chairman.*] From your acquaintance with the bad state of the burial-grounds in London, and with the negligence as to burying at the proper time among the poorer classes, do you not think that it is absolutely necessary there should be a legislative provision for the purpose of preventing burial-grounds continuing in populous cities, and for some mode of compelling burials to take place at the proper period?—I think that absolutely necessary; the mode of burying, and the tasks imposed upon the men, would make the matter highly injurious in many points of view. In the case of the poor, I am convinced that the indecent disposal of the dead, practised in many grounds, has begotten in their minds feelings of bitter animosity, and consequent estrangement towards the parochial authorities; that I consider as an important matter. I will give a proof of that. There are burial societies established in all the neighbourhoods; I have a book from which I will read rule the eighth; that is this: "This

society

society is established for the decent interment of its members; if the friends of any member behave so disrespectfully to the member as to bury him or her at the parish expense, he shall be entitled to no assistance." I have seen the most unseemly disputes about these things.

3513. There are great evils arising from the want of sufficient space, and the mode in which the burials take place?—Not merely physical evils, but moral ones.

3514. Mr. *Mackinnon.*] Is it your impression that the evils arising from those gases produced by putrefaction, are not merely physically injurious, but also demoralize the people by driving them to spirituous liquors?—I would not perhaps go so far as that; it would be difficult to say that; but if we take the instance of the grave-diggers, I would say that the system has educated a race of men, and compelled them to execute offices that they ought to shudder at; it is a very frequent circumstance for a grave-digger to cut a body in half.

3515. In consequence of the closeness with which they are packed?—Yes.

3516. He cannot get down to the grave without?—No, he cannot in many instances; and it is not only the making room, but the putrescent earth is thrown up; it is open longer than ought to be permitted.

3517. Is there any benefit or profit arising to the grave-digger from making use of the wood of the coffins?—That I have stated in my book. I took the police to see a sack full of that wood in a court in Carey-street; it is extensively burnt all over London; that (*producing it*) is a portion of a coffin I have brought; that poor creature died in Charing-cross Hospital; she had frequently burnt large quantities of it herself; this wood was drying with a large quantity which the police seized, and the fire was made of this wood when we entered the room. There was a large quantity I brought away, and sent it to the head police-office in Scotland-yard, with my compliments, that they had better look into the matter; they sent it to the parish, and they said, "Oh, it must be got rid of; the poor are quite welcome to it." This I produce was part of a pauper's coffin. I know a parish in which the grave-digger burns it as common fuel. I asked him whether he felt any stench from it; he said, "Oh, the people say it smells now and then;" but he was a drinking man. This state of things has in fact educated a race of men too frequently the most degraded and abandoned; with but few exceptions, they drink to excess, and indeed too frequently they are compelled to stimulate.

3518. The grave-diggers in those close neighbourhoods?—Yes, in the old burying-grounds: thus the sources of physical and moral evil are in an intimate degree identical; the condition by far of the majority of grave-yards and burying places in London has been such for many years, that they have not been capable of receiving the annual mortality. There are men who have unblushingly made the disposal of the dead a source of income to an extent that few would believe; some private speculators have long known that a freehold grave-yard is infinitely preferable as a source of profit to any other. The want of space has produced, among other inevitable results, a necessity for the disposing of bodies deposited in places utterly inadequate to contain them; they have been removed by various means, the spade or pickaxe of the grave-digger, or the application of lime. The wood of the coffins has been given away or sold in large quantities.

3519. Mr. *Mackinnon.*] Must not the deposit of a sack full of that wood in a house produce very injurious effects?—No doubt it must; but the people cannot see those active poisons evolved in their houses.

3520. You say that the poor are not in general aware of those gases impregnating the air, and that no precautions are taken by them to prevent it?—I cannot see what precautions can do if they live constantly in this atmosphere, and their children. I have invariably found that when a child or children have come from the country and gone to a badly drained house, in a few weeks they will succumb to the influence. There is a chapel in Clement's-lane, called Enon Chapel, to which I have before referred; there is a cellar underneath it, not covered with a lath and plaster defence, and there is nothing to prevent the exhalations passing up. In this there have been deposited about 12,000 bodies in about 15 years; on an average 30 bodies a week were buried there for a considerable time; it is used as a place of worship every Sunday, and is now occupied by a society who hold public meetings. I am quite amazed that such a place should have been permitted to exist. Sixty-four loads of bodies and earth, mixed together, were

G. A. Walker, Esq.

4 June 1840.

removed. Such was the intolerable stench that numbers left the place, and very commonly, during the services held here, four and five women have been carried out in a fainting condition.

3521. In your opinion did that arise from the stench of those bodies?—I think so, decidedly. Many have suffered seriously in their health. One man, whom I have recently examined, attributes a malignant typhus, which held him to his bed during seven months, to the exhalations from the bodies beneath, and I believe he was correct in that opinion.

3522. *Chairman.*] This evidence you have given of a particular spot, is strongly confirmatory of your general opinion of the necessity of burial-grounds being removed from large towns?—Certainly.

APPENDIX.

Appendix, No. 1.

PAPER delivered in by *T. Southwood Smith*, M.D.; 30 March 1840.

ABSTRACT of a REPORT on the Prevalence of FEVER in Twenty Metropolitan Unions, during the Year ended the 25th of March 1838.

Appendix, No. 1.

Report on Prevalence of Fever in the Metropolis.

ATTENTION having been directed to the general prevalence of fever in London, and more especially in certain of the Metropolitan Unions, it was deemed desirable to ascertain the actual number of fever cases that had occurred during one year among the whole of the persons who had received parochial relief during that year in London, inasmuch as the knowledge of this appeared likely to afford better means than had hitherto been obtained of forming an opinion as to the extent to which fever had been prevalent among the whole population of the metropolis. In order to obtain this information, a circular was addressed from the Poor-law Commissioners to the medical officers of the Metropolitan Unions, requesting them to make a return of the number of paupers attacked with fever in their several districts, during the year ended the 25th of March 1838. A formula was furnished to each medical officer, according to which he was requested to make his return; in which formula the cases of fever were arranged under certain classes, known from experience to be sure indications of the prevalence of the febrile poison, in greater or less degrees of intensity. The classes fixed upon were four; namely, intermittent fever, synochus, typhus, and scarlatina; scarlatina being included from a conviction that it does not differ in any essential character from the other forms of fever, while it is just as certain a test as they are of the prevalence or absence of malaria. Intermittent fever, commonly known under the name of ague, is characterized by the periodical return and disappearance of the febrile paroxysms, as remittent fever is by the remission, instead of the intermission of those paroxysms. Intermittent fever is the mildest form of fever. Synochus, commonly called continued fever, in contradistinction to intermittent and remittent, because the febrile symptoms neither intermit nor remit, but continue without ceasing from the beginning to the end of their course, and often also denominated common continued fever, because it is the ordinary fever of the country, is much more prevalent than intermittent, and very much more formidable and dangerous; yet it is less dangerous than typhus; from which indeed it is distinguished chiefly by the milder character of the symptoms, and by the severer, or, as they are often called, the typhoid symptoms, occurring, if they occur at all, which they often do in bad cases, only in the later stage of the disease. In general, also, in synochus, the internal organs, namely, the brain, the lungs, and the intestines, the organs which chiefly suffer in fever, are much less diseased than they are in typhus. This last form of fever (typhus) is characterized by the early and great depression both of the physical and mental powers, dependent, as is now ascertained, on the more early and much more intense disease of the brain, the lungs, and the intestines. Scarlet fever, characterized by the scarlet rash, which in the early stage of the disease generally covers the whole body, is far less constant both in its comparative prevalence and in its severity, than the two last species, being sometimes so mild as scarcely to require any attention, but at other times being more severe and fatal even than typhus, and approaching nearer to the nature of plague than any other disease with which we are acquainted.

Now it is a matter of experience, that in seasons when an epidemic is mild, in consequence it is inferred of the generation of a less quantity of the febrile poison, many cases assume an intermittent form; at other times, when the epidemic is more severe, the great majority of the cases consist of synochus; and in other seasons, again, when the epidemic is of a malignant character, there will be scarcely a case of intermittent fever or of synochus, but nearly all the cases will consist of typhus, or of a malignant form of scarlatina, in which the powers of life are overwhelmed at once, and the patient is dead in 30 or 40 hours from the first attack. What is true of seasons is true of localities. There are places well known in which intermittent fever never prevails, synochus rarely; almost all the cases are typhus, and whenever scarlet fever breaks out, it invariably assumes a most severe character; these are precisely the places in which fever is most prevalent; in which, indeed, it is so constant, that when the medical officers are questioned about it, they say, "From such and such a place fever is never absent." The evidence being indubitable that these several forms of fever are produced by one and the same cause, namely, organic matter, vegetable or animal, in a certain state of decomposition, the prevalence of these species of fever was taken as the means of testing both the intensity of the febrile poison and the extent and constancy of its presence. In the formula given in the circulars transmitted to the medical officers, the males of those that were attacked with fever were distinguished from the females,

Appendix, No. 1.

Report on Prevalence of Fever in the Metropolis.

females, also the ages were recorded, from the age of 5 to that of 90, and the event in each case was specified, whether recovery or death. When the formulas were sent back from the medical officers, filled up, the proportion of the number attacked, both to the general population and to the pauper population, and the proportion that recovered or died in each locality, at the several ages specified, whether male or female, were made out from the Returns, in the same manner, and with the same care as the mathematician ascertains the state of the population and the value of life, from the registers of the births, marriages, and deaths. The comparison of the facts thus ascertained affords very remarkable results, among the most striking and instructive of which are the following:

From these Returns it appears, that the total number of persons in the Metropolitan districts, who received parochial relief during the year ended the 25th of March 1838, was 77,186, and that out of this number, 13,972 were the subjects of fever.

Of these there were:—

Attacked with intermittent fever	402
— synochus	7,017
— typhus	5,692
— scarlatina	861
TOTAL	13,972

On comparing the pauper population of a district with the general population, it appears from these Returns, that there is no uniform relation between them; but on comparing the number of paupers attacked with fever in any district, with the actual number of paupers in that district, it is seen that there is still less relation between the one and the other; clearly indicating, that the prevalence of fever in a particular district depends upon causes which operate specially within that district. Thus, in Bermondsey, the number of paupers was 3,000, the number of fever cases was 593; while in Bethnal-green, the number of paupers being 3,632, the number of fever cases was 1,209; more than twice as many. In St. George-in-the-East, the number of paupers being 6,869, nearly double that of Bethnal-green, the number of fever cases, 627, scarcely exceeds one-half. Greenwich, compared with Bethnal-green, afforded nearly double the number of paupers, 6,607, but considerably less than one-half the fever cases, 522. In Lambeth, the number of paupers is more than double the number in Bethnal-green, but the fever cases in Lambeth exceed those in Bethnal-green only by 409. In St. Martin's-in-the-Fields, the number of paupers being only one-third less than those of Bethnal-green, the fever cases in the latter are nearly eight times more than those in the former. In Whitechapel, out of a pauper population of 5,856, 2,404 were the subjects of fever, nearly one-half; but in St. George-the-Martyr, the number of paupers being 1,467, the fever cases were 1,276, that is, the whole of the persons in this Union who received parochial relief, with the exception of 191, were the subjects of fever; a fact which places in a most striking point of view the pauperizing influence of this disease.

These Returns afford irresistible evidence of the fact, that the main sources of fever in London are certain districts. Thus, taking altogether the 20 Metropolitan Unions, they yield a total of 13,927 cases of fever; but out of this number, 9,228 were afforded by seven of the Unions only; namely, Whitechapel, Lambeth, Stepney, St. George-the-Martyr, Bethnal-green, Holborn, and St. George-in-the-East. These are among at once the most populous and the poorest districts; and it is here that fever is constantly committing its ravages. It is utterly impossible for any description to convey to the mind an adequate conception of the filthy and poisonous condition in which large portions of all these districts constantly remain; an adequate conception of this can be obtained only by an actual inspection of them.

From these Returns it appears further, that of the four primary forms of fever, there were of synochus, 7,017, that is, more than one-half of the whole; of typhus, there were 5,962; of agues 402; and of scarlet fever 861, about double the number of agues. Taking together these several forms of fever, out of the total number attacked (13,972), there were 1,281 deaths; consequently, the average mortality of the disease, for the whole of London, was somewhat more than one in eleven; but on comparing the mortality in the different species of fever, it is seen to be widely different; thus, in intermittent fever, out of 402 attacks, there were 25 deaths, that is, one in sixteen; in synochus, out of 7,017 attacks, there were 344 deaths, less than one in twenty; but in typhus, out of 5,692 attacks, there were 836 deaths; consequently, this species of fever was threefold more mortal than synochus; while in scarlatina, out of 861 attacks, there were 76 deaths, or one in eleven; a very high rate of mortality for this form of fever.

These Returns place in a striking point of view the fact, on which the attention cannot be too steadily fixed, that all the districts which are signalized as those in which fever is most constantly and extensively prevalent, are invariably those in which the worst species predominates; in which the severest cases occur, and in which, whatever be the species, the mortality is the greatest. Thus, out of the 5,692 cases of typhus, the total number that occurred in all the Unions, 4,002 of the cases were yielded by the seven Unions which have been already specified as pre-eminently the malarian districts; viz.

There occurred of typhus,

Appendix, No. 1.

Report on Prevalence of Fever in the Metropolis.

In Whitechapel	1,505	4,002 cases.
Lambeth	503	
Stepney	469	
St. George-the-Martyr	463	
Bethnal-green	303	
Holborn	224	
St. George-in-the-East	535	

On the other hand, in the following eight Unions, viz. Camberwell, Hackney, St. Martin's-in-the-Fields, St. Olave's, Rotherhithe, Strand, Wandsworth and Clapham, and West Ham, there occurred, of typhus fever, in all, only 648 cases; these eight Unions yielding only 648 cases, while the seven malarian Unions yielded 4,002. In like manner, out of the total number of cases of scarlatina (861), there occurred in three of these malarian Unions, viz. Lambeth, Stepney, and Whitechapel, upwards of one-half (477); and out of the total number of deaths produced by this disease (76), 45 took place in these same three places.

From the whole it appears, that out of 77,000 persons who have received parochial relief, 14,000 have been attacked with fever, one-fifth part of the whole; and that out of the 14,000 attacked, nearly 1,300 have died. It should be borne in mind that there is no disease which brings so much affliction into a poor man's family as fever; it commonly attacks the heads of the family; those upon whose daily labour the subsistence of the family depends. The present returns afford melancholy evidence of the pauperizing influence of this wide-spreading and mortal disease. They show that while one-fifth of the whole pauper population during the year in question, has been attacked with fever, in Bethnal-green the proportion was one-third; in Whitechapel it was nearly one-half; and in St. George-the-Martyr it was 1,276 out of 1,467. Placing out of consideration the suffering of the individual attacked with fever, which, however, is one of the most painful maladies to which the human being is subject; placing out of view also the distress brought upon all the members of the family of the sick, it is plain that this disease is one of the main causes of pressure upon the poor-rates. That pressure must continue, and the same large sums of money must be expended year after year for the support of families afflicted with fever, as long as those dreadful sources of fever which encompass the habitations of the poor are allowed to remain. They would not, they could not be allowed to remain if their nature were really understood, and if the ease with which the most urgent of them might be removed were known. But there do not appear to be any practicable means of removing them without legislative interference; and if the care of the public health be a part of the duty of the Legislature; if in the Metropolitan Unions, which alone include a population of 851,000 souls, it be certain that conditions exist which are absolutely incompatible with the public health, and which conditions are to a very considerable extent removable; and if it shall be found that similar conditions exist in all the large towns in Great Britain, here would seem to be a proper and legitimate field for the exercise of legislative wisdom and power.

(signed) *Southwood Smith.*

To the Chairman of the Select Committee on the Health of Towns.

Appendix, No. 2.

LETTER delivered in on the 8th of April 1840.

LETTER from *John Roberton,* Esq. Surgeon at *Manchester,* to the Chairman.

Appendix, No. 2.

Letter from J. Roberton, Esq. to the Chairman.

Sir, Manchester, 2 April 1840.

IN legislating with reference to the health of towns you will find difficulties (I speak of Lancashire) owing to the existence of local police Acts. For not only does each manufacturing town possess an Act, but Manchester has one for, I believe, each of the eight townships which compose it; at all events, each of the larger townships has its own police Act. The conjoined towns of Manchester and Salford, commonly known by the inclusive name Manchester (consisting of eight townships, namely, Pendleton, Salford, Broughton, Cheetham, Manchester, Ardwick, Chorlton-upon-Medlock, and Hulme, with a population of probably 260,000 souls) is a huge overgrown village, built according to no definite plan. The factories have necessarily sprung up along the watercourses, which are the rivers Irk, Irwell, and Medlock, and the Rochdale Canal, and the dwellings of the work-people have kept increasing on the confines of the factory districts. The interest and convenience of individual manufacturers and owners of property has determined the growth of the town and the manner of that growth, while the comfort, health, and happiness of the inhabitants have not been considered till subsequently, if indeed (which is doubtful) they are much regarded even now.

Until twelve years ago there was no paving and sewering Act in any of the townships; even in the township of Manchester, containing in the year 1831 upwards of 142,000 inhabitants, this was the case; and the disgraceful condition of the streets and sewers on the

Appendix, No. 2.

Letter from J. Roberton, Esq. to the Chairman.

invasion of the cholera you have no doubt learned from Dr. Kay's able and valuable pamphlet. At this present time the paving of the streets proceeds rapidly in every direction, and great attention is given to the drains. Upon the whole, it is gratifying to bear testimony to the zeal of the authorities in carrying on these salutary improvements, especially when it is known that no street can be paved and sewered without the consent of the owners of property, unless a certain large proportion of the land on either side is built upon. Owing to this cause several important streets remain to this hour disgraceful nuisances.

Manchester has no Building Act, and hence, with the exception of certain central streets, over which the Police Act gives the Commissioners power, each proprietor builds as he pleases. New cottages, with or without cellars, huddled together row behind row, may be seen springing up in many parts, but especially in the township of Manchester, where the land is higher in price than land for cottage sites in other townships is. With such proceedings as these the authorities cannot interfere. A cottage row may be badly drained, the streets may be full of pits, brimful of stagnant water, the receptacles of dead cats and dogs, yet no one may find fault. The number of cellar residences you have probably learned from the papers published by the Manchester Statistical Society, is very great in all quarters of the town; and even in Hulme, a large portion of which consists of cottages recently erected, the same practice is continued. That it is an evil must be obvious on the slightest consideration, for how can a hole underground of from 12 to 15 feet square admit of ventilation so as to fit it for a human habitation?

We have no authorized inspector of dwellings and streets. If an epidemic disease were to invade, as happened in 1832, the authorities would probably order inspection, as they did on that occasion, but it would be merely by general permission, not of right.

So long as this and other great manufacturing towns were multiplying and extending their branches of manufacture and were prosperous, every fresh addition of operatives found employment, good wages, and plenty of food; and so long as the families of working people are well fed, it is certain they maintain their health in a surprising manner, even in cellars and other close dwellings. Now, however, the case is different. Food is dear, labour scarce, and wages in many branches very low; consequently, as might be expected, disease and death are making unusual havoc. In the years 1833, 1834, 1835, and 1836 (years of prosperity), the number of fever cases admitted into the Manchester House of Recovery amounted to only 1,685, or 421 per annum; while in the two pinching years, 1838 and 1839, the number admitted was 2,414, or 1,207 per annum. It is in such a depressed state of the manufacturing districts as at present exists that unpaved and badly sewered streets, narrow alleys, close unventilated courts and cellars, exhibit their malign influence in augmenting the sufferings which that greatest of all physical evils, want of sufficient food, inflicts on young and old in large towns, but especially on the young.

Manchester has no public park or other grounds where the population can walk and breathe the fresh air. New streets are rapidly extending in every direction, and so great already is the expanse of the town, that those who live in the more populous quarters can seldom hope to see the green face of nature. It is true, nothing contributes more to the salubrity of a town than liberty to extend its limits in every direction; in that case, the streets, it may be expected, will be spacious, and the buildings of moderate height, whereby a free circulation of air will be secured even in the most central parts; but this liberty admits of abuse, which certainly happens when no public walks or grounds are reserved for the inhabitants. In this respect Manchester is disgracefully defective, more so, perhaps, than any other town in the empire. Every advantage of this nature has been sacrificed to the getting of money in the shape of ground-rents. The evil is perpetrated, and cannot now be remedied, at least without an expense too great to be thought of.

Forty years ago this island supported a population of less than 11,000,000, and its arable surface was divided amongst perhaps as large a number of proprietors as it is at present. But how great the change in that brief period! About 7,000,000 of inhabitants have been added to the then existing stock, a large proportion of whom are congregated in towns and villages, and depend for bread on the wages of labour. Unquestionably, therefore, new laws and regulations are become necessary for sanatory purposes in the civic government of towns. Every year shows, that upon the rich and the intelligent, especially upon the Christian, and, above all, upon the Christian Legislature, new and heavier duties are devolving. But the evils which exist are so numerous, and the subject under inquiry is one of so complex a nature, so vast and so overwhelming, that I feel myself compelled to be silent with respect to the remedial measures, and to subscribe myself, with the greatest respect,

Yours, &c.

To R. A. Slaney, Esq. M.P. (signed) *John Roberton.*

INDEX.

In this Index, *Rep. p.* refers to the Page of the Report, and the *Figures* following the Names to the Questions of the Evidence.

A.

ABATTOIRS. Great advantage to be derived from abattoirs; they are generally adopted on the Continent, *Jenks* 2792.——*See* also *Slaughter-houses.*

AIR IN COURTS:

Generally.—Free currents of air might be produced by cutting openings, which might be done at a moderate expense, *Smith* 34.

Saffron-hill, Holborn Union.—There are numerous courts and alleys, several of which have no current of air, *Wilkes* 416–418.——*See* also *Alleys. Courts.*

Aldersgate-street. Mass of misery and impurity from the back of Aldersgate-street to Golden-lane, and thence to Bethnal-green, *Jordan* 159.

Alfred-row (Bethnal-green). Accumulation of filth in it; wretched construction of the houses; prevalence of fever, *Smith* 48.

ALLEYS:

Ashton.—Fronts of houses in many instances very near each other, *Ashton* 2603.

Leeds.—Numerous alleys and yards in which free circulation of air is prevented from their construction, *Williamson* 1713.——*See* also *Courts.*

Arnott, Neil, M.D. (Analysis of his Evidence.)—Neglect of drainage in great towns is the cause of fevers and other illnesses, 505, 506——Necessity of having sloping drains, and of paving all courts and alleys, 507——Of a plentiful supply of water, 509——And an effective service of scavengers to remove offal, 510——Importance of ventilation by wide streets and well-constructed houses, 511——Malaria arises from burial-grounds where the bodies are not covered deeply enough, 512–514——Disgusting state of parts of Wapping, Ratcliff Highway, and Stepney, inspected at the request of the Poor Law Commission; prevalence of fever, 517–520——Typhoid fevers would disappear under proper sanatory police regulations, and at a less expense than is now incurred in maintaining orphans and widows, 521–523.

Malaria injures the health generally, and then all diseases become more serious, 524, 525——Proofs of want of drainage causing fever, 528, 529——Case of a school at the back of Euston-square in which sickness disappeared after the filling up of a lake of filth, 530——Scantiness of food is an exciting cause of fever and other sickness, 532–534——In the suburbs of London, where there has been an increase of building, no attention has been paid to drainage, 535–538——Some compulsory power to enforce cleansing and drainage is necessary, 539, 540.

The wind blows into courts, which would in that way be ventilated, except that there being no thoroughfare, filth is thrown in and accumulates, 541–546——There should be some authority to enforce communication with the sewers, and to prevent cesspools being dug below the level, 547, 548.

A board of health for the whole kingdom would be excellent economy, and only justice to the great body of the labouring classes, 549–556. 581, 582——The board of guardians would be the fittest authorities for carrying sanatory measures into effect, 557, 558——It would be their office to prevent sickness; now, their only care is to cure it, 559–561——Case in which the higher classes were affected with fever on account of defective drainage, 562——The north-west of London is the most healthy, as the prevailing winds are south-west and north-east, 563——Wherever there is drainage the habits of the people are more cleanly, 564, 565——The children of a class of persons living from generation to generation in crowded cities visibly deteriorate, 566–573——Houses opposite to gullyholes may be affected with fever, 574——The slaughtering of cattle in crowded places, and in cellars, must be injurious to health, 575–580.

Injury arising from churchyards, 583——Ignorance displayed at the Zoological Gardens in placing animals in an unventilated house, 583——Extraordinary scenes of intemperance in St. Giles's on a Saturday night, 584–587——Stinted growth and weak constitutions of children of drunken parents; they die very soon, 588–590——The evils of spirit-drinking have increased of late, 591–594——The open spaces in the eastern parts of London are not beneficial to health, being full of ditches and stagnant water, 595–597——Much sickness is caused by want of fuel; the poor think that spirits will supply the place of fire, 598, 599——The poor use their fuel very uneconomically; plan of Count Romford; witness's

Report, 1840—*continued.*

Arnott, Neil, M.D. (Analysis of his Evidence)—*continued.*
witness's invention of cooking apparatus, &c. in a stove that will cost only 1*d.* or 2*d.* a day, 600–612——Ventilation would be improved at the same time, 613–615——On Sunday many of the poor go from their houses; those who have not clothes conceal themselves, 616, 617.

Ashforth, Mr. Care taken of the children in his mills, *Symons* 1175–1177.

Ashton, Mr. State of workmen at his factories, *Fletcher* 1272.

Ashton. State of working classes, *Cobden* 1811——Evidence as to population; mode of building in Ashton, *Ashton* 2597——Fewer cellar residents than at Manchester and Liverpool; bad sewerage and ventilation, *Wood* 2241.

Ashton, Thomas. (Analysis of his Evidence.)—Resides at Hyde, near Manchester, 2596——Lives near Ashton, Staleybridge, and Dukinfield, 2597——Extent of population; inhabited principally by working classes, 2599——Not so many houses built in close courts as in other towns, 2601——In the alleys the fronts of houses are in many instances very near each other, 2603——Drainage very good in Dukinfield and Ashton; in Staleybridge principally good, 2604——Principally surface drains, 2606——At present no system of inspection; such an arrangement very desirable, 2611——All paving is optional, except the public roads, which are done under the Turnpike Act, 2612——No building regulations in respect of space, 2619——Nor any system of inspection as to cleanliness, 2620——Water very well supplied under recents Acts of Parliament, 2621——No places reserved for the exercise of the people; but the places being small, inhabitants can get out to the surrounding districts, 2623——A general building Act, which would promote improvement in the dwellings of the poor, would be of great use, 2624——If the houses are not comfortable, the working classes are much more likely to resort to the public-houses, 2625.

Ashworth, Edm. (Analysis of his Evidence.)—Resides at Turton, near Bolton, 1834——Population of Bolton 50,000, 1836——A considerable increase in the houses in the last 15 years, 1837, 1838——A great portion of the small houses built back to back, 1840——There are sewerage Acts, but they are very inefficient, 1842——Highly desirable to have regulations as to buildings, sewerage, &c. in all crowded populations, 1844–1846——Schools in Bolton are without play-grounds, 1849, 1850——The moor was inclosed 20 years ago, without any reservation for the poor, 1855——Want of a larger class of cottage for well-employed workmen, 1857——The supply of water is ample, good, and cheap, 1858——There is a great demand for all sorts of cottages, 1872——Building societies at Bolton prevail considerably among the poorer classes, but more freely among the shopkeepers and better class of people, 1875.

Ashworth, Mr. State of workmen at his factory, *Fletcher* 1272.

Assessments (Dublin). Mode of assessing for the sewers' rate in Dublin, *Maunsell* 3245. 3248. 3258, 3259.

B.

Back-Ball Alley (St. Bartholomew's). There is neither drainage nor ventilation; every room is occupied by a family; number of fever cases, *Miller* 800-803.

Back-Bear Alley (West London Union). Numerous cases of typhus fever; want of ventilation and drainage; the city of London have made sewers, and not a case has since occurred, *Jordan* 138–144——Fever has extended from Back Bear-alley to other places, *Jordan* 167.

Baker, William. (Analysis of his Evidence.)—Clerk of commissioners of sewers for Poplar district, 1548——Almost all the district below the level of the river, 1553——Sewers regulated by means of sluices, 1554——Amount of rate, 1554——Limehouse has been much improved, 1558——There are no means of forcing houses to communicate with sewers, 1561——Frequent applications to arch over the Great Field sewer, 1566——Abundance of drainage and sewerage in witness's district; drains want arching over anywhere that houses are built, 1576——Power to enforce simultaneous cleansing of sewers would be most important, 1580——Commissioners have very much felt the want of this power; proceedings been greatly embarrassed in consequence of not having such power, 1581.

Baker's-Arms Alley (Whitechapel). Effluvia arising from all sorts of putrefying matter, and want of light and air, *Smith* 65, 66.

Baldwin's Gardens (Holborn Union). A long street between Gray's-inn-lane and Leather-lane has no sewer, and many of the houses are in a filthy state, *White* 357–361.

Ballast Board, Dublin. Power of that body to prevent animal and vegetable matter being cast into the Liffey, *Maunsell* 3270.

Report, 1840—*continued.*

Bartholomew's, St., the Great. Neglect of drainage; filthy state of streets; stagnant cesspools; prevalence of fever, *Miller*, 796–800.

Baths:

Generally.—Establishment of public baths for the benefit of the poorer classes very necessary, *Rep. p.* xx. xxi.; *Fletcher* 1305; *Duncan* 2501; *Jenks* 2779.

Leeds.—Two public baths in Leeds; one for better classes, and one, to a certain extent, used by working classes, *Williamson* 1774.

London.—Public baths could be supplied with water at a small expense, *Moseley* 1044–1055.

Westminster-road, Lambeth.—Dimensions of the baths in the Westminster-road, charge for admission, supply of water, &c., *Sowten*, 3060–3102.

Bayswater Sewer. Was executed by Government, by an issue of Exchequer bills, to be paid off in twenty years, *White* 2594——This mode might be applied to most towns, charging the capital borrowed on the rent of the houses, *White* 2594.

Beckwith-row (Bethnal-green). Accumulation of filth in it; wretched construction of the houses; prevalence of fever, *Smith* 48.

Bedworth. Improved state of Bedworth since the arrival of the present rector; his successful exertions to ameliorate the moral condition of the people, *Fletcher* 1246.

Benefit Societies. By no means so general as might be desirable, *Fletcher* 1331.

Bethnal-green. Miserable state of the population, *Rep. p.* v——Dampness of Bethnal-green; practice of silk weavers to close their windows, *Smith* 25——The open spaces in Bethnal-green being neglected and filled with stagnant water, instead of being healthy, are injurious, *Smith* 128–130——Is not generally crowded; there is no reason that it should not be healthy, except that the necessary precautions are not taken, *Smith* 40——Large stagnant open ditch behind it; inhabitants constantly suffering from fever, *Smith* 60.

Bethnal-green Union. Number of pauper fever cases which occurred in the union in the year 1838, *Smith* 17–21——Expense of fever cases to this union, *Smith* 30.

Birmingham. State of Birmingham; necessity for sanatory regulations, &c., *Rep. p.* xii.——Entirely devoid of open space; Manchester and Macclesfield also without any such convenience, *Fletcher* 1241.

Birmingham Clubs. Generally speaking, more popular among working classes than benefit societies not well managed, *Fletcher* 1331.

Blue-Anchor Yard (Whitechapel). Accumulation of filth; neglect of drainage; prevalence of fever, *Smith* 69.

Board of Health. Advisable to establish, in every town of a certain amount of population, a board of health, with particular duties, *Rep. p.* xviii; *Arnott* 546–556, 581, 582; *Williamson* 1888. 1895. 1938. 1940; *White* 2593; *Smith* 2742; *Hodson* 3002; *Maunsell* 3295. 3298. 3303–3396.

Bone-boilers. Necessity of removing the bones from the bone-boilers' yards in the midst of a densely peopled district, where they are decomposed for manure, *Moseley* 1016–1034.

Bone-boiling. Should, in crowded populations, be put down by law, *Pennethorne* 2880.

Boot-and-Shoe Yard, Leeds. Cases of malignant fever continually sent to the fever hospital, *Williamson* 1678.

Bordesley District, Birmingham. Bad state of the dwellings of this district, *Wood* 2274——Open sewerage in this quarter, *Wood* 2281–2284.

Bradford. State of Bradford as to sewerage, drainage, courts, lodging-houses, &c., *Williamson* 1801.

Building Act. Provisions proper to insert in any new Building Act, *Rep. p.* xv——An improvement in the Building Act, to prevent persons building courts, would be desirable, *Byles* 255–257——Desirable to have general Building Act, that should lay down general regulations to prevent such forms of structure as are injurious, *Pennethorne* 2831——Proper regulations as to buildings and width of streets should be enforced, *Williamson* 1879——A general Building Act would promote improvement in the dwellings of the poor, *Ashton* 2624; and would be advantageous, *Cubitt* 3407——Obstacles to the drawing a general Building Act, *Cubitt* 3421–3423.

Dublin.—Powers proposed to be granted under a Building Act for Ireland, *Maunsell* 3329–3341——Necessity for a Building Act for the city of Dublin, *Maunsell* 3328.

London.—Principal provisions of the Building Act are for the purpose of insuring thickness of party-walls, and to prevent accident from fire, *White* 2545——Want of regulations; some general law on the subject necessary, *White* 2553–2558——Nothing

 impracticable

Report, 1840—*continued.*

Building Act—continued.

impracticable in a general Building Act, the regulations of which might be carried out by local authorities, *White* 2559——In the neighbourhood of the metropolis, the Building Act does not take in many places which are now growing very populous, *Smith* 2636——At present there are seven rates or classes of buildings, *Smith* 2664——London Building Act; its powers, *Pennethorne* 2828.

Building Regulations:

Ashton, &c.—None at Ashton, Staleybridge, or Dukinfield, *Ashton* 2619.

Liverpool.—No regulation in Liverpool as to buildings, *Wood* 2169——Good building regulations would be very favourable to the health of the working classes, *Wood* 2170——Extent of Building Act powers in Liverpool, *Duncan* 2438.

Building Societies, Bolton. Building societies at Bolton prevail considerably among the poorer classes, but more frequent among shopkeepers and better class of people, *Ashworth* 1875.

Bulkington. State of the population in the village of Bulkington, *Fletcher* 1235.

Burial-grounds. Continuance of burying-grounds in the midst of populous cities is most injurious to health, *Rep. p.* xx——Malaria arises when the bodies are not covered deeply enough, *Dr. Arnott,* 512-514. 583——There are several between Golden-lane and Bunhill-row, and are very injurious, *Moseley* 883–888——Highly prejudicial to the health of towns having burial-grounds in the central parts of the town, *Jenks* 2787——Choice of sites for burial-grounds, *Jenks* 2789, *Walker* 3134-3139, 3488. 3493——Doubtful whether burial-places are detrimental to the health of inhabitants, *Hodgson* 3020.

See also *Cemeteries.*

Bury. State of working classes, *Cobden* 1811——Fewer cellar residents than at Manchester and Liverpool; bad sewerage and ventilation, *Wood* 2241.

Byles, Samuel. (Analysis of his Evidence.)—Lives in Church-street, Spitalfields; reported to the Poor Law Commissioners on that district, 176, 177——Worst places in the Whitechapel Union enumerated; they have been the constant abode of fever, 178——And in Spitalfields parish, 179——State of Hudson's-court; when persons die of fever, their rooms are let immediately, without any precaution or warning, 180. 182, 183——Defective state of the drainage in all the courts and alleys, and some of the back streets, 181——Under the New Police Act the district surveyor is liable to a penalty if a nuisance is not removed when pointed out to him, 184——Much expense is cast upon the poor rate by the sickness of the poorer classes; if the causes were removed a great saving would be effected, 185–190——One of the greatest improvements to the district would be the opening of spacious and extended thoroughfares, 191, 192——The commissioners of sewers cannot make persons communicate with the sewers; on the contrary, there is a penalty for communicating with them, 193–196——In many parts of the Tower Hamlets there are ancient above-ground watercourses, which, being obstructed by houses, form into stagnant pools, 197——There are houses with 10 or 12 rooms, and a family in each room, 198——The district is well supplied with water from the East London Company, 199.

The sewerage is not regularly inspected, but only casually by the inspector of pavements, 200–211——There should be a power from the Government to attend to measures of a sanatory nature, 212——Small-pox is prevented in a great degree by vaccination, but when it does occur it is of the confluent kind, 216, 217.

The efficiency of schools is much diminished by the condition of the children's homes, 218–220——There is no play-ground to the schools except to Hare-street Fields British School, 221——They use much coarse bad fish, which disposes them to disorder, 222–225——The children in the silk weaving factories have cocoa for breakfast, 226–228——General wages of the district, 230——Marked difference between the children of weavers and of other people; they are subject to scrofulous diseases, 231–235——The weavers work in very close rooms, 236–238——The surveyor of pavements is the only officer who has power to remove nuisances, 239–243——Neglect of landlords to cleanse their houses; cases in which persons died of fever on entering an unclean house, 244——There should be an officer of health in every neighbourhood, to assist the medical officer, 245. 250——He should be independent of local authority, 246, 247——The whole attention of one person would be occupied, 248, 249——The expense should be borne by the county, 251——Fever hospitals appoint officers of this kind, but they frequently meet with difficulties, 252—— A good system of sewerage is the first thing to be attended to, 253, 254——Improvements in the Building Act to prevent persons building courts would be desirable, 255–257——Disgusting neglect of privies, a great source of typhus fever; improvement of Wentworth-court in this respect, 258, 259——Great nuisance of lodging-houses; there is no power of inspection, 259–261——Great importance of a thoroughfare, as recommended by the Committee on Metropolitan Improvements, 262.

C.

Camberwell, Surrey District Sewers. Application from board of guardians, Camberwell, to commissioners of sewers; line of sewerage has been formed under the public road from Camberwell-green to Walworth, *Drew,* 1514——Sewer constructed a year since in Camberwell, of a mile long, at the urgent request of the inhabitants; only one application has been made for opening a drain into the sewer, *Newman,* 2102——Sewer brought up to a certain point to drain a stagnant pond; inhabitants have not availed themselves of it, *Newman* 2119.

Campden Gardens, Bethnal-green. Extraordinary malignity of the fever in this place, where the houses, if properly built and drained, are healthily situated, *Smith* 42, 43.

Cartwright-street, Whitechapel. Filthy and unwholesome state thereof; prevalence of fever, *Smith* 68.

Castle-street, Westminster. Filthy and unwholesome state of the alleys, *Moseley* 854, 855.

Cellars:

Generally.—Miserable habitations, but not so bad as the word cellar would indicate generally, *Fletcher* 1280——If possible, the poor should be prevented or discouraged from living in cellars, *Williamson* 1950, 1951.

Birmingham.—Many persons live in cellars in Birmingham, which, when lighted and well ventilated, are not unwholesome, *Hodgson* 3068.

Dublin.—Description of the cellar dwellings of the lower orders in Dublin; want of drainage, *Maunsell* 3180. 3182.

Hull.—No cellar residents in Hull, *Wood* 2361.

Liverpool.—Evidences as to cellar population, *Cobden* 1820–1830——Rent of cellars 1*s.* 6*d.* to 3*s.* 9*d.* per week, *Wood* 2155——Principal part of the streets in which the poor live have only surface drainage; smell of cellars most offensive, *Wood* 2164——There are 8,000 inhabited cellars at the present time, *Duncan* 2370——Statement that these cellars are dark, damp, confined, and ill ventilated, is quite correct, *Duncan* 2373——Cellars frequently contain two and three families, *Duncan* 2377——Miserable state of cellars as to light and air, *Duncan* 2412——Extent of fever in the cellar population, *Duncan* 2415.

Manchester.—Number of persons resident in cellars in Manchester, *Cobden* 1837——Cellar residences not so numerous at Manchester as at Liverpool, *Wood* 2210——Unhealthy state of the cellar population, *Smith* 2650–2653.

Salford.—Number of persons resident in cellars in Salford, *Cobden* 1833.

See also *Ashton. Courts. Drainage.*

Cemeteries:

France.—Not allowed in France within a mile of the bills of mortality, *Jenks* 2788.

Naples.—Cemeteries not permitted within two miles of the town, *Jenks* 2788.

Cesspools. Commissioners of Sewers should have power to prevent the sinking of cesspools, *Heelis* 295, *Unwin* 1413, *Drew* 1491, *Smith* 2690, 2691, *Pennethorne* 2859——Cesspool drainage, in any general Sewerage Act, should be prohibited altogether, *White* 2578——State of cellars in courts from the oozing through of cesspool water; frequently holes dug in cellars to hold water, *Duncan* 2515——Too many cesspools allowed in Brighton, *Jenks* 2762——Of great use if commissioners had power to prevent the formation of cesspools, *Jenks* 2773——State of the drainage of London 50 years ago, during the prevalence of cesspools, *Cubitt* 3452.

Children:

Generally.—The children of families living from generation to generation in crowded cities visibly deteriorate, *Dr. Arnott* 566–573——Stunted growth and weak constitutions of children of drunken parents; they die very soon, *Dr. Arnott* 588–590——The constitution of children would not be affected by the habits of their parents, unless actual disease had been engendered, *Moseley* 933–944——Injurious effects of the filthy state of the close streets and courts on the children, *Wood* 2224, 2225.

Glasgow.—Are very emaciated; their occupations; want of instruction, *Symons* 1100–1107. 1173, 1174.

Liverpool.—Bad health of children in the crowded districts of Liverpool, *Wood* 2167.

Report, 1840—*continued.*

CHOLERA:

Birmingham.—State of the town of Birmingham during the existence of the cholera, *Hodgson* 2977.

Drogheda.—Town decimated by cholera, *Maunsell* 3322.

Edinburgh.—Absence of cholera from the village of Restalrig, *Miller* 3846.

Lambeth.—Effects of the cholera in the Surrey districts of sewerage, from the filth of the district; 30 or 40 persons living in houses in the filthiest state, *Newman* 2099.

Liverpool.—Extent of cholera, in 1831, in Liverpool, *Duncan* 2430.

Manchester.—Injurious effects of the state of the town on the inhabitants, demonstrated during the cholera, *Wood* 2217.

St. Olave's.—There have been recent cases of cholera, *Clarke* 494, 495.

Saffron-hill.—Evils of cholera much aggravated from the form of buildings and the confined state of courts, and want of proper sewerage, *Smith* 2644.

See also *Disease.*

Church-row, Limehouse. Inconvenience of a private drain; the inhabitants will not agree together to cleanse it, *Heelis* 300.

Church-street, Bethnal-green. The main thoroughfare has no drain; mode of cleansing, *Smith* 55, 56.

Clarke, John. (Analysis of his Evidence.)—Medical officer of St. Olave's union, 442——It is chiefly inhabited by the working classes, who obtain a precarious livelihood from the wharfs, 445——The Greenwich Railway intersects the district, 447——The inhabitants are principally Irish, and are crowded together in courts and alleys; the houses are ill built and ventilated; filthy state of the privies built over open ditches, 448, 449——There is very little fall in these ditches, and a great accumulation of filth takes place, which generates typhus fever, 449–452——Population of the district; proportion of the working classes, 453–455——Their mode of life predisposes them to fever, 456, 457——Their wages at the wharfs are not enough to maintain their families, 458–461——The supply of water is good, 463——The people throw all the refuse and offal into the open gutters, 464.

The leet jury have the power of presenting these nuisances, but no one takes sufficient interest in the matter, 465–468——It is the duty of the commissioners of pavements to see that the courts and alleys are properly cleaned, 469–472——Sickness is very prevalent among the children, 473——Very few go to school, and those who do suffer from the filth and evil example of their homes, 474–478——Number of cases attended; number of fever patients, 479–482——Small-pox has prevailed very much, 483——The labouring classes would have no objection to the use of vaccination, 484–487——Vaccination modifies the disease so much, that it hardly requires medical treatment, 489——The parish is not above spring-tides; the drainage might be well effected by sluices, 490–493——There have been recent cases of cholera, 494, 495——The great quantity of rain last season cleansed the ditches, and there were fewer cases of fever, 496–499——The poor-rates have been reduced more than one-half in the last three years, 500.

Cleanliness:

Holborn Union.—There is no system of inspection in this union to lead to cleanliness, *White* 375–377——It would be a great advantage if power were given to cleanse and whitewash after fever, *White* 378–382——The want of cleanliness has an effect upon the moral character of the children, *White* 409, 410——Neglect predisposes to epidemic diseases, *Evans* 661.

Stepney Union.—There are many courts in Limehouse in which illness prevails for want of cleanliness, *Heelis* 278–280.

Clement's-lane, Strand. Filthy state of this lane, *Walker* 3125. 3153, 3154——The mortality in that street equals that of the worst district in London, *Walker* 3155.

Clement's, St., Church, Strand. Intolerable nuisance arising from the stench of dead bodies in the church, *Walker* 3501.

Coal. Importance of facilitating the acquisition of coal, *Smith* 123, 124.

See also *Fuel.*

Cobden, Richard. (Analysis of his Evidence.)—Resides at Manchester, 1808——State of population at Manchester, Salford, Bury, Ashton, and Staleybridge, 1811–1817——Evidence as to the state of the poor population in Liverpool, 1820——Courts in Liverpool, 1823——Cellar population, 1820–1830——Necessarily, in large towns rapidly increasing, a great number of streets not paved, and not soughed, which is of course exceedingly prejudicial to health, 1831——But those parts of Manchester under the management of commissioners are as well cleansed and soughed as any town of the same magnitude in the kingdom, 1831——Number of persons resident in cellars in Manchester, 14,960; in Salford, 3,335, 1833.

Coffins. Proof of the insalubrity of the courts in Liverpool, that the expense of boards for coffins in one year amounts to 441 *l.*, *Wood* 2149.

Cole-alley, Dublin. Description of the habitations of the poor therein, *Maunsell* 3208.

Report, 1840—*continued.*

Commercial Road. Evidence as to buildings erected in the Commercial Road by the Mercers' Company, rent, &c., *Smith* 2722.

Contagious Disorders, Birmingham. Promotion of contagious disorders from the existence of beggars' lodging-houses, *Hodgson* 2990–2994.

Copyhold Tenure. How copyhold tenure tends to deteriorate the class of houses built, *Cubitt* 3443.

Cork-street Fever Hospital, Dublin. Number of patients in that hospital, showing the proportion from Cole-alley and Gill's-square, *Maunsell* 3209.

Corrie, Dr. His account of the extent of fever among the lower classes at Birmingham, *Wood* 2285.

COURTS:

Generally.—The wind blows into them, but there being no thoroughfare, filth is suffered to remain, *Dr. Arnott,* 541–546——A most injurious construction for houses, *Fletcher* 1274——Witness entertains no doubt as to the necessity of some legislative enactment, giving power to the local authorities for the purpose of cleansing and improving the state of these neglected courts, *Duncan* 2452—— Any new building Act should forbid the construction of courts of a certain description, and building houses back to back, *Smith* 2656—— Every court should be of a width comparative with the height of the houses on either side, *Smith* 2658.

Birmingham.—Prevalence of close courts in the old part of the town, *Hodgson* 2969.

Brighton.—A great number of the population, chiefly fishermen, inhabit courts, some under arches, others open at the end, *Jenks* 2756.

Dublin.—Construction of the courts inhabited by the lower orders in Dublin, *Maunsell,* 3172.

Hull.—State of courts in Hull, North Myton district, *Wood* 2324–2331.

Leeds.—Bad state of the dwellings of the poor; improvements requisite, *Williamson* 1677–1696.

Liverpool.—Evidence as to their wretched condition, *Cobden,* 1823——Several of the courts have sixteen houses; in one, with sixteen houses, forty families resided, *Wood* 2143——2,271 close courts in Liverpool, *Duncan* 2380——Evils of courts from want of ventilation, *Duncan* 2382–2391——On an average, six and seven families in each house; perhaps 86,400 inhabitants in Liverpool living in courts, *Duncan* 2392——Courts generally extremely filthy; scavengers remove filth only once a week, *Duncan* 2397 A great many now building in Toxteth Park, *Duncan* 2436.

London.—Evidence as to the manner of planning courts in London; general construction very injurious to health, *White* 2549——Many instances of ill-built courts in London; generally every room occupied by a family, all huddled together, *Smith* 2642 ——Many instances of courts in London with the worst ventilation, *Smith* 2654.

Manchester.—Close courts more common in Manchester than Birmingham, *Fletcher* 1273.

Westminster.—Are very dirty; uncleanly habits of the poor; the scavengers never enter them, *Weld* 1196–1198. 1217–1219. 1220–1226.

See also *Alleys. Bartholomew,* St. *Bethnal-green. Building Act. Cellars. Children. Cholera. Cleanliness. Coffins. Drainage. Farringdon-street. Fever. Giles,* St. *Lodging-houses. Sewers. Stepney. Whitechapel.*

Coventry. Habits of people in Coventry superior to those of working classes in other large towns, *Fletcher* 1234.

Crime, Birmingham. Promotion of crime in Birmingham from the existence of beggars' lodging-houses, *Hodgson* 2990–2998.

Crown-court, Whitechapel. No sewerage in this court, *Peeke* 2014.

Cubitt, Thomas. (Analysis of his Evidence.)—A builder in London, 3397——The practice of building houses back to back, in close courts, is extremely injurious to health, and exceedingly dangerous in cases of fire, 3402—— A general Building Act would be very advantageous, but would be very difficult to carry into operation, 3407——Class of persons usually proprietors of habitations of the poor, 3408——Seldom that a capitalist embarks in this description of property, 3409——Proposed regulations for ensuring proper ventilation of houses and width of streets, 3410——Regulations under the Building Act for making party-walls, 3414——The poor should be protected against nuisances arising from manufactories and gas-works, 3417——A general system of sewerage and drainage should be adopted; cleansing is wholly neglected in those districts where the rates are difficult of collection, 3417.

Predilection of the lower orders to dram-drinking, and cause, 3418——The present habitations of the poor are extremely injurious to their morals, 3419——Obstacles in the way of a general Building Act, 3421–3423——Importance of providing airing-grounds for the lower orders; the want of them drives people into public-houses, 3423——No street should be less than 40 feet in width, 3427——Poposed regulations for ensuring proper sewerage and drainage; necessity for a public officer to prevent nuisances from

Report, 1840—*continued.*

Cubitt, Thomas. (Analysis of his Evidence)—*continued.*

manufactories and gas-works, 3428——No steam-boats should be allowed to ply that showed any smoke out of the funnel, 3430——Inutility of the Act for compelling the owners of steam-engines to consume their own smoke; case of an action brought against a large gas-works for nuisance, and decision in favour of the gas company, 3431.

Improved moral and social condition of the working classes in London, 3440——How copyhold tenure tends to deteriorate the class of houses built, 3443——It is rather a disadvantage to the working population of London that everything in the shape of houses is leasehold; it would be a very good thing if in every parish throughout England there were certain lands appropriated for building, where a man might buy, but not exceeding a certain quantity, 3444——Heavy expense attendant on making out a title to a small purchase, 3445——Defects in the working of the commissions of sewers in London; none of the main sewers should be carried into the Thames, 3447——Mr. Martin's plan of drainage does not go far enough, 3448——Proposed plan for remedying the sewerage in London; the noxious matter should be let out beyond the river Lea; bad state of the drainage from Paddington to Chelsea, 3449——State of the drainage of London fifty years ago, during the prevalence of cesspools, 3452.

System of saving the manure formerly by means of laystalls, 3452——Proposed alterations in the board composing the commissioners of sewers; the commission consists of too large a number of persons, 3453——Advantages of a general Sewerage Act for regulating the drainage of large towns, 3456——The attention of the Legislature should be directed towards framing a general Building Act and Sewerage Act, 3459.

Cul-de-Sacs. Want of ventilation in places of this description, as instanced in several out of Drury-lane, *Walker* 3464.

See also *Alleys. Courts.*

D.

Dames'-Schools:

Generally.—State of dames'-schools, *Wood* 2348.

Birmingham.—Better regulated than at Liverpool and Manchester, *Wood* 2296——267 dames'-schools and 3900 scholars, *Wood* 2298.

Liverpool.—Wretched state of dames'-schools, *Wood* 2185–2197——Prices at schools, 2*d.* to 6*d.* per week, *Wood* 2198.

Manchester.—Deplorable state of dames'-schools, *Wood* 2226.

Day-Schools:

Birmingham.—State of day-schools, *Wood* 2304-2307.

Liverpool.—Close and offensive atmosphere in the day-schools, *Wood* 2185.

Dead Bodies. See *Burial Grounds. Cemeteries. Clements,* St.

Dewsbury. Would be much benefited by some general enactment as to sanatory regulations, as recommended by the Committee, *Williamson* 1807.

Diet.—Scantiness of food an exciting cause of fevers, *Dr. Arnott* 532–534.

Glasgow.—Scanty diet of the people; potatoes and small quantity of meat; they drink much spirits, *Symons* 1186–1188.

Lambeth.—The diet of the people is fish and spirits, *Wagstaffe* 737–739. 744–748.

Disease:

Generally.—People are enfeebled by a polluted atmosphere, and more disposed to disease, *Moseley* 872-875. 896–899——Malaria injures the health, and then all diseases become more serious, *Dr. Arnott* 524, 525.

Birmingham.—One great source of disease in Birmingham is the existence of poor lodging-houses, *Hodgson* 2990.

Drury-Lane.—Dreadful cases of disease in Wellington-court, Drury-lane, arising from want of ventilation and accumulation of filth, *Walker* 3469–3471.

Dublin.—Prevalence of disease in those parts inhabited by the lower orders, as instanced by the number of patients from Cole-alley and Gill's-square, *Maunsell* 3209.

London.—Spread of disease to healthier places from want of regulation as to buildings, sewers, &c., *Smith* 90, 91——Other diseases besides fever prevail, such as small-pox, measles, and cholera, *Smith* 109–113.

See also *Cholera. Measles. Small-pox.*

Dispensaries:

Liverpool.—Medical relief to the poor generally obtained from the dispensaries, *Duncan* 2468.

Limehouse.—There is no dispensary in this district; proportion of sick to the population, *Heelis* 325–327.

See also *Fever Hospital.*

Report, 1840—*continued.*

District Surveyor. An authority to enforce cleanliness and ventilation, similar to that of district-surveyor, as to party-walls, but more extensive, is needed, *Wagstaffe* 780–785.
See also *Inspection.*

Drainage of Land. Effect of sewers in draining lands; a general benefit to houses where they are placed, *Newman* 2126, 2127.

DRAINAGE:

1. *Generally.*
2. *In particular Places.*

1. *Generally:*

Some general power to enforce drainage absolutely necessary, *Moseley* 926; *Ellison* 1604; *White* 2568; *Jenks* 2779; *Pennethorne* 2866; *Hodgson* 2983——By proper drainage, much disease might be removed; to incur expense in making drains would be economy, *Smith* 29. 31–33——Neglect of drainage in large towns is the cause of fevers and other illnesses, *Dr. Arnott* 505–507—— The want of it predisposes to fever; expense thus thrown upon the parish, *Wagstaffe* 688–692——Advantage of above-ground drainage over under-ground drainage, *Hodgson* 2980——Advantages of a general Drainage Act, *Jenks* 2779——Advantage of a general Act to compel commissioners of sewers to make drains before the houses are erected, *Hodgson* 2983——Proposed regulations for ensuring proper sewerage and drainage; necessity for a public officer to prevent nuisances from manufactories and gas works, *Cubitt* 3428.

2. *In particular Places:*

Ashton and Staleybridge.—Drainage in Ashton and Staleybridge principally good; generally surface drainage, *Ashton* 2606.

Bethnal-green and Whitechapel.—Greater prevalence of fever where drainage is bad; districts could be pointed out as defective in sewers by the number of cases of fever, *Smith* 7–9——Districts in which this defect is observed; they are the most densely populated, and by the poorest classes, *Smith* 10–13.

Birmingham.—Generally speaking, very superior in Birmingham to the large towns in Lancashire, *Wood* 2269——Natural advantages which the town of Birmingham possesses for drainage, *Hodgson* 2976—— Closure of certain noisome drains during the prevalence of the cholera in that town, *Hodgson* 2977——Defect in the construction of the drains in Birmingham; proposed remedies, *Hodgson* 2980——Evils of the present system of making drains from houses to main sewers, *Hodgson* 2983——In many parts of the town the levels are so high that they do not drain the cellars, *Hodgson* 2980——None should be constructed that did not admit a man to go up and clean them, *Hodgson* 2980.

Brighton.—A decided want of under-ground drainage, *Jenks* 2762.

Drury-lane.—General want of drainage in the courts and allies in the vicinity of Drury-Lane, *Walker* 3468.

Dublin.—Reason why the system of drainage in Dublin is defective, *Maunsell* 3237. 3244.

Dukinfield.—In Dukinfield drainage very good, *Ashton* 2604.

Glasgow.—Its defective state; no improvements were made while the population was rapidly increasing, *Symon's* 1069–1071. 1123–1130.

Holborn Union.—The health of the poor would be improved by better drainage, cleanliness, and ventilation, *White* 408.

Limehouse District, Stepney Union.—The health of the inhabitants is very much affected by the open drains; in 1838 nearly every family living near one of them was affected by fever, *Heelis* 267–276——The drains communicating with the sewers are very imperfect, *Heelis* 277.

Liverpool and Manchester.—Drains and stagnant places left open in the populous districts immediately round Manchester and Liverpool, *Wood* 2251.

St. Olave's.—The parish is not above spring-tides; the drainage might be well effected by sluices, *Clarke* 490. 493.

Southwark.—The communications with the drains are neglected, *Evans* 644–648.

Spitalfields.—Defective state of the drainage in all the courts and alleys, and some of the back streets, *Byles* 181.

Wednesbury, &c.—Defective state of the drainage in the Wednesbury, Bilston, and Walsall district, *Hodgson* 3010.

Whitechapel Union.—Inadequacy of the regulations for building and draining described, *Smith* 79–83.
See also *Bartholomew,* St. *Camberwell. Cellars. Cesspools. Cleanliness. Courts. Sewers.*

Drains to Sewers. Unwillingness of landlords to incur expense in forming drains to sewers, *Newman* 2117. 2120.

Report, 1840—*continued.*

Dram-drinking. The neglect of decency and cleanliness has a great tendency to dram-drinking, *Maunsell* 3370——The misery of the people produces it, *Maunsell* 3373; *Cubitt* 3418; *Walker* 3157. 3478.——*See* also *Spirits.*

Drew, Beriah. (Analysis of his Evidence.)—Clerk of Surrey and Kent district of sewers, extending from the Ravensbourne to the Mole, 1470——Trust comprises Southwark, Lambeth, Rotherhithe, Deptford, &c. 1472——Powers under local Act, 1473——Mode of constructing and making drains; application of landlords; amount of contribution of landlords, and rate, 1480——No power to force inhabitants to communicate with sewers, 1486——Great many cases in which houses do not use sewers, 1487–1489——No power to prevent the formation of cesspools being made below the level of the sewer, 1491——Arching over open sewers very beneficial to the health of the neighbourhood, 1492——Amount of sewers-rate levied in the district about 6*d.* in the pound, 1494——Application from board of guardians, Camberwell; line of sewerage has been formed under the public road from Camberwell-green to Walworth, 1514——Carelessness of lower classes as to sewers, 1524——Commissioners have power of inflicting fines on persons communicating with sewers without consent, 1527——System of inspection of sewers by surveyors, 1535–1543.

Drogheda. That town was decimated by the cholera, *Maunsell* 3322.

Dublin. Neglected state of that portion of the city inhabited by the poorer classes, *Maunsell* 3196–3200.

Dublin Commissioners of Sewers. Powers of the commissioners, *Maunsell* 3237–3244——Class of persons composing the board, and extent of their jurisdiction, *Maunsell* 3250–3252——Inadequacy of their powers, and deficiency of their funds, *Maunsell* 3253.

Dublin Wide-Street Commissioners. Power of the commission to regulate buildings in Dublin, *Maunsell* 3190.

Dukinfield. Fewer cellar residents than at Liverpool and Manchester; bad sewerage and ventilation, *Wood* 2241——Evidence as to population, buildings, drainage, &c., *Ashton* 2597.

Duncan, W. H., M. D. (Analysis of his Evidence.)—Physician, living at Liverpool, 2363——Physician at the dispensaries, 2365——Great increase in the number of buildings, 2368——There are 8,000 inhabited cellars at the present time, 2370——Statement that these cellars are dark, damp, confined, and ill ventilated, is quite correct, 2373——Cellars frequently contain two and three families, 2271. 2377——Close courts in Liverpool, 2380——Evils of courts as to ventilation, &c., 2382-2391——On an average, between six and seven families in each house; perhaps 86,400 inhabitants in Liverpool living in courts, 2392——No court has an under-ground sewer, 2395——In the main streets, the greater number of those inhabited by the working classes, there are no sewers, 2395——Courts generally extremely filthy; scavengers remove filth only once a week, 2397——Average width of streets where poor live, twenty-five feet, 2398——Bad state of privies in courts, 2401——Number of persons crowded in single rooms, 2402——Great mortality at Liverpool, occasioned by the dreadful state of these streets and courts, 2406.

Miserable state of cellars, as to light and air; frequently no floor, 2412——Extent of fevers in the cellar population, 2415——No authority has power of inspection in the closely-peopled courts, 2417——No inspection with regard to sewerage drainage, 2418——Amount lately laid out in sewers; sum exhausted, 2418——Local Act not power to force houses to communicate with sewers, 2420——Mortality in Liverpool in various years before and after the Registration Act, 2427, 2428——Extent of cholera, 2430——Such a state of things makes diseases more virulent than in other districts, 2433——Scarlet fever and small pox very prevalent among the poor, 2434——A great many courts now building in Toxteth-park, 2436——Extent of Building Act powers in Liverpool, 2438——Imperfect regulations as to supply of water, 2442——These courts exempt from local taxation, 2446——Only 900 cottages contribute; payments made by the Conservative and Reform Association, 2446.

Witness entertains no doubt as to the necessity of some legislative enactment, giving power to the local authorities for the purpose of cleansing and improving the state of those neglected courts, 2452——Evils of this filth and dirt on the physical and moral condition, 2453, 2454——Wretched state of lodging houses; worse than courts; 30 or 40 collected sometimes in one house, 2460——A very large proportion of Irish, 2465——Spirit drinking prevails very much, among the females particularly, 2466——Medical relief generally procured from the dispensaries, 2468——Expense of the Fever Hospital, 2470——Prevalence of fever and rheumatism in the crowded courts and cellars, 2471–2475——Parochial advantages in rates, &c. if cleanliness was more attended to, 2469–2476——State of lodging houses, 2480——Lodging houses should be subject to sanatory regulations; should be inspected periodically, 2487——No power at present to interfere in any way with the state of courts, 2488–2490.

There are no reserved places for the poor to exercise except St. James's Park, and the two Cemeteries and the Pier-head, 2494–2497——A very great advantage if public baths were provided for the poor, 2501, 2502——Filthy state of Union-court in Banaster-street;

Report, 1840—*continued.*

Duncan, W. H., M. D. (Analysis of his Evidence)—*continued.*

street; fevers generated in consequence of want of drainage, 2511, 2512——Dreadful state of Spencer-court, North-street, 2513——State of cellars in courts from the oozing through of cesspool water; frequently holes dug to hold the water, 2515——Neglect of sewerage and drainage in Liverpool, 2518–2521——Amount of population in cellars and courts, 2522——Great advantages would arise from opening new streets and carrying them through densely populated districts, 2538——Number of fever cases from the different populous streets in Liverpool, 2539.

Duncan, Mr., of Restalrig. Occasion of an action being brought by him against the tenants of the proprietors of the stream, to restrain them from irrigating their lands, *Miller* 3028.

Dust-holes, Dublin. No receptacle whatever for dust and ashes in the houses of the poorer classes, *Maunsell* 3204.——*See* also *Courts.*

E.

East-street, Lambeth. Necessity of forming a sewer there, *Wagstaffe* 685–687.

East Ward, Leeds. Bad state of the East Ward, *Williamson* 1688.

Edinburgh. See *Holyrood House. Irrigation.*

Education. Any benefits arising from education would be very much neutralized by neglect of the cleanliness and decency of the habitations of the poor in large cities, *Williamson* 1730–1734.

See also *Dames' Schools. Day Schools. Pauper Children. Schools.*

Elgar-court, Whitechapel. There is no sewerage in this court, *Peeke* 2014.

Elliott's-court, West London Union. Together with Dean's-court and Phœnix-court, are very narrow, and a family occupies every room; some of the courts have no thoroughfare, *Jordan* 148, 149.

Ellison, Joseph. (Analysis of his Evidence.)—Resides near Bradford, 1582——Population, 1583——There is no public drainage or sewerage at all; sewerage extremely defective, 1589——Sewerage and drainage very much neglected, 1591——Typhus fever now prevailing in Bradford; opinion of medical men that it is mainly owing to the defective state of the drainage and sewerage, 1593–1597——Paving attended to in Bradford, but not in the suburbs, which are the largest portions of the town, 1598——There is no regulation whatever as to buildings, for ventilation or for preventing houses being built back to back, 1601——Some general power to enforce drainage and cleanliness and sanatory regulations, absolutely necessary, 1604——Sanatory regulations would be a great saving to the rates of a parish, 1610——Limited powers of the local Act of Bradford, 1618——Enclosure of Fairweather-green, the only spot near Bradford for the poor to resort to; a Bill now before Parliament for its enclosure, 1628——The employment of the poor at Bradford is combing wool, 1633——The town is not well supplied with water, 1638——Small-pox at present very prevalent at Bradford, 1641.

English Labourers. The English labourers are much more cleanly in their habits than the Irish; they are more free from fever, *Wilkes* 436–438.

Enon Chapel, Clement's-lane, Strand. Injury done to the health of the inhabitants from the effluvia of the burying ground, *Walker* 3139.

Essex-street, St. Giles. Miserable state of this district, *Pennethorne* 2797.

Essex-street and Court, Whitechapel. No sewerage in this street and court, *Peeke* 2014.

Euston-square. Disappearance of fever in a school at the back thereof, on the filling up of a lake of filth, *Dr. Arnott* 530.

Evans, Edward. (Analysis of his Evidence.)—Relieving officer of St. George's, Southwark, and a surgeon, 618–620——The Mint is crowded with dilapidated houses, which are choked up for want of ventilation, 623–626——Number of cheap lodging-houses; their neglected and filthy state, 626, 627——The yards are filthy; the cesspools overflowing with water and filth, 628, 629——The neglected open drains and cesspools are very prejudicial to the health, especially in the times of the cholera and influenza, 630–635——The district is well supplied with water, 636–638——Open ditch in Kent-street, Southwark; almost every inhabitant had the typhus fever, 641–643——The communications between the houses and the drains are neglected, 644–648.

Neglected and dangerous state of the privies, 649, 650——Commissioners under local Acts see to the cleansing and scavengering of the parish, but not to a sufficient extent, 651, 652——A system of inspecting houses, to enforce cleanliness, is much needed, 653, 654——Open gutters are very injurious, 655–659——Neglect of cleanliness predisposes

Report, 1840—*continued.*

Evans, Edward. (Analysis of his Evidence)—*continued.*

to epidemic diseases, 661——School accommodation in the parish; the children who attend school are the healthiest and most cleanly, 662–671——The people get their water at cocks common to several houses, 672–674——The ditch in Kent-street could easily be drained into the common sewer, 675–678——Necessity of care with respect to the gratings of sewers, 679, 680.

F.

Factory System. The bad appearance of the working classes in large towns arises more from disorderly habits, and the circumstances of towns, than the factory system, *Fletcher* 1298.——*See* also *Ashforth. Ashton. Ashworth. Gregg.*

Fairweather-green, Bradford. Enclosure of Fairweather-green, the only spot near Bradford for the poor to resort to; a Bill now before Parliament for its enclosure, *Ellison* 1628.

Farringdon-street. Miserable state of the courts which are situated in that district, *Pennethorne* 2797.

Fever:

1. *Generally.*
2. *In particular Places.*

1. *Generally:*

Typhoid fevers would disappear under proper sanatory regulations, and at a less expense than is incurred in maintaining orphans and widows, *Dr. Arnott* 521–523——Prevalence of fever in the densely populated districts, arising from the filthy state of the streets, and wretched description of habitations, *Maunsell* 3209–3230.

2. *In particular Places.*

Birmingham.—Dr. Corrie's account of the extent of fever in the closely populated districts of Birmingham, *Wood* 2285.

Drury-lane.—Prevalence of fevers in the confined courts of Drury-lane, *Walker* 314.

Dublin.—How fevers and contagious disorders are promoted by the neglected state of the district occupied by the lower orders, *Maunsell* 3213.

Holborn Union.—The number of cases of fever has fallen off of late, *White* 403–407.

Liverpool.—District in which fevers principally prevail is that in which cellars abound, *Wood* 2152——Extent of fever among the cellar population, *Duncan* 2415. 2471——Number of fever cases from the different populous streets in Liverpool, *Duncan* 2539.

Manchester and Liverpool.—Fevers are often generated in Manchester and Liverpool by want of provisions, *Wood* 2257.

St. Olave's.—Number of cases attended; number of fever patients, *Clarke* 479–482——The great quantity of rain last season cleansed the ditches, and there were fewer cases of fever, *Clarke* 496–499.

Saffron Hill, Holborn Union.—The district is unhealthy, and there have been many fever cases, *Wilkes* 419–423——Great expense is thrown upon the parish by them; a guinea is paid for each patient, *Wilkes* 424–425.

Whitechapel.—General causes of fever in Bethnal-green and Whitechapel; greater prevalence of fever where drainage is bad, *Smith* 6–9——Peculiar prevalence and malignity of the fever, *Smith* 14–16.

See also *Bartholomew,* St. *Bethnal-green. Campden Gardens. Cartwright-street. Cholera. Contagious Diseases. Diseases. Cork-street Fever Hospital. Corrie,* Dr. *Fever Board. Fever Hospital. Infectious Disorders. Infected Houses. Inspection. Irrigation. Landlords. London. Measles. Mortality. Sewers.*

Fever Board, Edinburgh. They clean out and whitewash; in many instances inhabitants refuse permission, *Simpson* 1969, 1970.

Fever Hospital, Liverpool. Expense of the fever hospital, *Dunn* 2470.

Field-lane, St. Andrew's. Typhus fever is never away from Field-lane; the Fleet Ditch runs through it; description of inhabitants, *Smith* 175.

Fines. Commissioners of sewers have power of inflicting fines on persons communicating with sewers without consent, *Drew* 1527——Power of the commissioners of streets in Birmingham to fine persons for not emptying their dust-holes, *Hodgson,* 3005, 3006.

Fish. Much coarse bad fish is used in the Spitalfields district, which disposes the people to disorder, *Byles* 222–225.

Report, 1840—*continued.*

Fleet-street, Bethnal-green. Closely and densely populated; prevalence of malignant fever, *Smith* 51.

Fleet Ditch, The. Is open nearly a mile, from Snow-hill to Clerkenwell-green; the back windows of the houses occupied by the working classes open directly upon it; all the sewers are emptied into it, *Jordan* 153, 154——There is a good supply of water twice a week, which carries away the refuse, *Jordan* 155–158——Is in a filthy state, and very productive of fevers, *Moseley* 877–879.

Fletcher, Joseph. (Analysis of his Evidence.)—Assistant hand-loom weaver commissioner, 1232——Habits of people in Coventry remarkably superior to those of the people in Macclesfield and Manchester, 1234——Condition of weavers at Foleshill, 1235——State of Bulkington and Hartshill, 1235——Evidence of Mr. Herbert, mayor of Coventry, as to comparative habits of working classes formerly and at present, 1237——Old royal manor formerly an open space; now enclosed; property of Marquess of Hertford, 1238——Working classes stand in great need of some places on which they could get out to take exercise, and promote health, 1240——Want of open spaces applies to all large towns, 1241——Birmingham entirely devoid of open ground; Manchester and Macclesfield without any such convenience, 1242——Among the manufacturing population there is a great want of active amusement, 1245——State of Bidworth, where there is an improving trade and a well-fed population, 1246——On the Ancoats side of Manchester the town is much improved by the commissioners of police, 1262——State of Irish Town by the Medlock; absence of paving, 1262——In many parts houses stand back to back, a mode of building very injurious to the health of the inhabitants, 1264, 1265.

Good state of the workmen belonging to the mills of Mr. S. Ashton, Mr. Ashworth, Mr. Henry Ashworth, and Messrs. Gregg, 1272——Close courts less common in Manchester than Birmingham, where they prevail universally, 1273——Close courts a most injurious mode of construction, 1274——The plan should be carried into effect by Act of Parliament, regulating width of courts, &c., 1276——Cellars, no doubt, miserable habitations, but not so bad as the word cellar would indicate; generally areas, 1280——Houses should not be allowed to be built back to back, 1288——A considerable saving would arise from better sanatory regulations as to poor-rates, fever hospitals, and charitable institutions, 1290, 1291——The bad appearance of the working classes in large towns arises more from disorderly habits, and the circumstances of towns, than the factory system, 1298.

Great advantage of bathing-places for the working classes, 1305——Disadvantageous manner in which the population has been brought together in large towns, from their not having, till lately, anything but institutions calculated for a rural people, 1313——Comparative state of wages at Birmingham and Manchester, 1320——Benefit societies by no means so general as might be desirable, 1331——Generally speaking, they have what are called Birmingham clubs, which are a mutual insurance for a year, 1331–1333——There are no regulations as to officers, 1335——The losses they sustain through defalcation, and the insufficient custody of their funds, is proverbial, 1336——Very few trade clubs get an allowance when out of work, 1341.

[Second Examination.]—Was in connexion with the hand-loom inquiry commission, 1649——Assistant secretary to municipal boundary commission, 1649——A deficiency of powers and of authorities to exercise them for sanatory regulations, 1650——Sewers regulations of London, 1651——Sanatory regulations absolutely necessary for the large towns; scarcely any of the great towns which do not exhibit it, 1658——A complete system to secure draining, cleansing, paving the streets, and the proper construction of dwelling-houses, most desirable, 1660——System of inspection very much wanted, and very desirable, 1664.

Foleshill. Evidence as to the condition of weavers at Foleshill, *Fletcher* 1235.

Food and Clothing. Food and clothing of the working classes better now than formerly, *Williamson* 1930.——*See* also *Diet.*

Fountains. Supply of water to the inhabitants of Dublin by means of fountains, *Maunsell* 3276.

Fuel. Much sickness is caused by want of fuel; the poor think that spirits will supply the place of fire, *Dr. Arnott* 598, 599——Uneconomical use of fuel by the poor; Count Romford's plan; witness's invention for cooking, &c., *Dr. Arnott* 600–615——The expense of fuel in the metropolis affects the general health of the younger classes, *Heelis* 339–341——There is no want of fuel in Holborn Union; much charitable relief is given; they generally have good fires, *Wilkes* 440.——*See* also *Coal.*

G.

Gas Works. The poor should be protected against nuisances arising from gas-works, *Cubitt* 3417——Case of an action brought against a large gas-works for nuisance; decision in favour of the gas company, *Cubitt* 3431.

George Yard, Whitechapel. No sewerage in this yard, *Peeke* 2014.

Report, 1840—*continued.*

Gibraltar Walk, Hackney-road Division. Accumulation of putrefying matter therein; prevalence of fever, *Smith* 52.

George's, St., in the East. Neglected state of the parts inhabited by sailors, *Moseley* 957–967. 982–997.

Giles, St. Populous and filthy district; more than one family occupy a room, *Moseley* 864–870——Miserable courts of which this district is composed, *Pennethorne* 2797.

Gill's-square, Dublin. Description of the habitations of the poor therein, *Maunsell* 3209.

Glasgow. State of Glasgow; want of ventilation, sewerage, cleansing, &c., *Rep. p.* xiii. ——Exceeding bad state of the poorer classes; filth and misery of the wynds; neglect of drainage; prevalence of fever; rate of mortality, &c., *Symons* 1068–1119. 1134, 1135 ——It is in a worse condition than any town upon the Continent, *Symons* 1152–1158 ——There is a large open space for exercise, and the situation of the city is naturally good, *Symons* 1182–1185.

Goldsmith's-place to Cambridge-heath, Bethnal-green. Striking improvement in the health of the district between these places since a common sewer was made, *Smith* 58, 59.

Gravediggers. Disgusting occupation of that class of persons; perquisites accruing to them from the wood of coffins, *Walker* 3517.

Gray's Inn Lane. District near there; defects of drainage, &c., *Moseley* 907, 908.

Great Field, Poplar. Frequent applications from inhabitants to arch over the Great Field sewer, Poplar, *Baker* 1566.

Green Dragon Court, West London Union. Filthy and unwholesome state thereof; raging of typhus fever and small-pox, *Jordan* 145, 146.

Gregg, Messrs. State of workmen at their factories, *Fletcher* 1272.

Guardians, Boards of. Would be the fittest bodies for carrying sanatory measures into effect, *Dr. Arnott* 557, 558.

Gullyholes. Persons living opposite to gullyholes may be affected with fever, *Dr. Arnott* 574——Necessity of care with respect to the gratings of sewers, *Evans* 679–680.

Gutters (St. Olave's). The leet jury has the power of preventing nuisances, but no one takes sufficient interest in the matter, *Clarke* 465–468.——*See* also *Open Gutters.*

Guy's Hospital. A sewer about to be formed 900 feet in length, surrounding the property of Guy's Hospital, arched over partly at the expense of the hospital, partly at that of the commissioners, *Newman* 2129.

H.

Hamilton, Dr., of Edinburgh. His opinion that the irrigation of the meadows in the neighbourhood of Edinburgh was by no means injurious to health, *Miller* 3041.

Hare-street Fields, Bethnal-green. Frequent inundations; malignant character of the fever which is constantly breaking out, *Smith* 47——Extent to which excavations are worked; brick clay and gravel removed; district left in holes; this state of things a public nuisance; commissioners of sewers no power to prevent it, *Peeke* 2080–2085.

Hartshill. State of the population in the village of Hartshill, *Fletcher* 1235.

Heelis, Robert. (Analysis of his Evidence.)—Medical officer for the Limehouse district of the Stepney Union, 263–265——Class of population, 266——The health of the inhabitants is very much affected by the open drains; in 1838 nearly every family living near one of them was affected by fever, 267–276——The drains communicating with the sewers are very imperfect, 277——There are small courts in which illness prevails from want of cleanliness, 278–280——They are never visited by the scavenger, 281–284——Many of the old houses are very dilapidated, 285, 286——There was a sewer in one of the streets in which the cholera broke out, but the drains did not run into it; there was not a house that did not lose an inhabitant, 287–289——Dilapidation of a house in Globe-alley, 290——There is no power of compelling persons to cleanse houses in which persons have died of fever, 291–293——There should be some power of inspection, 294.

There is no power to oblige persons to drain into the sewers, or to prevent them from sinking cesspools below the level, 295–297——Extraordinary improvement in the health of the inhabitants of White's-rents since the covering of an open sewer, 298, 299——Inconvenience of a private drain at Church-row, Limehouse; the inhabitants will not agree together to cleanse it, 300——The supply of water is good in Limehouse, 304——There is no authority to compel the construction of houses so as to conduce to health, 305, 306——The principal mortality is amongst the children, on account of their miserable

Report, 1840—*continued.*

Heelis, Robert. (Analysis of his Evidence)—*continued.*

miserable dwellings, 309——Management of the Stepney Union school; healthiness of the children; they are taught to work, and learn gymnastic exercises, 313–322.

There is no dispensary in the district; proportion of sick to the population, 325–327——Precarious life of the Irish working at the docks; numbers living together in one house, 328——Injurious effect of their filth and destitution upon the children, 329–332——Small proportion who go to school, 333–337——The board of guardians would be the best authority to prevent these evils, 338——The expense of fuel in the metropolis affects the general health of the younger classes; the houses are badly constructed, and require heat very much, 339–341——Any good plan laid down for the houses of the poor would not be generally adopted, 342.

Herbert, Mr. Mayor of Coventry; his evidence as to comparative habits of working classes formerly and at present, *Fletcher* 1237.

Hodgson, John. (Analysis of his Evidence.)—Medical man, residing at Birmingham, 2964——Superiority of the habitations of the humbler classes in Birmingham, compared with the towns in Lancashire, 2968——Prevalence of close courts in the old part of the town, 2969——It is the general practice to build houses in courts back to back; want of ventilation in consequence, 2972——Improvements effected in Birmingham by the commissioners of sewers, 2974–2980——Natural advantages which Birmingham possesses for drainage, 2976——State of the town during the cholera; closure of certain noisome drains during that period, 2977——Defects in the construction of drains in Birmingham; proposed remedies, 2980——All main drains should admit a man to go up and clean them, 2980——Advantage of a general Drainage Act to compel commissioners to make sewers before houses are erected; evils of the present system of making drains in Birmingham from houses to main sewers, 2983——Promotion of disease from the existence of poor lodging-houses, 2990——Wretched state of the beggars' lodging-houses in Birmingham, 2991——They should be placed under a system of inspection, 2993——Advantage of an inspector of courts and alleys in large towns, 2998——A board of health would be very desirable in Birmingham; the commissioners of streets should be empowered to act as such, 3002——Practice of keeping pigs in houses is very detrimental to health, 3005.

Powers under the Metropolitan Police Act of abating nuisances; in all cases of nuisance the landlord should be made the responsible person, the tenants being too poor to remedy the evil complained of, 3007——Many persons live in cellars in Birmingham, which, when well lighted and ventilated, are not unwholesome, 3008——State of the habitations of the people of the Wednesbury, Bilston, and Walsall district, 3010——Goodness of the supply of water in Birmingham, 3013——General healthy state of the people of Birmingham, 3015——Prevalence of schools with play-grounds attached, 3017 Advantages of play-grounds to the health of the inhabitants, 3018——Doubtful whether burial-places are detrimental to health, 3019——Putrid decomposed vegetable matter is extremely detrimental to health, 3020——Superior state of the poorer classes of Irish in Birmingham; they are chiefly employed by builders, 3021, 3022.

Holborn. A court in the neighbourhood of Holborn horrible to go up; in a most filthy state, *Smith* 2647.

Holborn Union. Parishes of which this union is composed, *White* 353.

Holyrood House. Stench on King's domains, Holyrood, so dreadful from the sewer water used for irrigation, that the poor cannot walk there except on particular days, *Simpson* 1970—— Declared by the Queen's physicians to be unfit for a residence for Her Majesty, on the ground of insalubrity, occasioned by the present mode of irrigation from the sewers, *Simpson* 1988——The practice of irrigation prevails in the royal domain of Holyrood, *Stodhart* 1995.

Hooping Cough. Disease much aggravated by the wretched manner in which the poor live in large towns, *Wood* 2249.

Houses:

1. *Generally.*
2. *In particular Places.*

1. *Generally:*

New houses are not built better than the old ones, *Smith* 125, 126——Any good plan laid down for the houses of the poor would not be generally adopted, *Heelis* 342——No dwelling-houses in courts should be erected of greater height than the width of the street, *Pennethorne* 2843——The practice of building houses back to back in close courts is extremely injurious to health, and exceedingly dangerous in cases of fire, *Cubitt* 3402.

Report, 1840—*continued.*

Houses—continued.

2. *In particular Places:*

Birmingham.—Superiority of the dwellings of the lower orders in Birmingham, compared with the manufacturing towns of Lancashire, *Hodgson* 2698——It is the general practice in Birmingham to build houses in courts back to back, *Hodgson* 2972——Badly constructed habitations of the poor in Birmingham, *Cubitt* 3402.

Bolton.—Great demand for cottages of all sorts, *Ashworth* 1857. 1872——Great number of the small houses built back to back, *Ashworth* 1840.

Brighton.—Unhealthiness of houses run up back to back, *Jenks* 2758, 2759.

Limehouse District.—Many of the old houses in the confined courts are in a very dilapidated state, and very damp, *Heelis* 285, 286——Dilapidation of a house in Globe-alley, *Heelis* 290.

Wednesbury, &c.—State of the habitations of the people of Wednesbury, Bilston, and Walsall district, *Hodgson* 3010.

Huddersfield. Would be much benefited by the application of sanatory regulations, as recommended by the Committee, *Williamson* 1887.

Hudson's Court, Spitalfields. Old and dilapidated state thereof; when persons die of fever the rooms are let immediately, without any precaution or warning, *Byles* 180. 182, 183.

Humber Ward. State of courts in that district, *Wood* 2332.

I.

Infected Houses. There ought to be power to prevent persons from entering them before they have been limewashed, *Miller* 816, 817——Houses infected with fever should be shut up for a time and limewashed; there is no power to compel landlords to do it, *Wagstaffe* 697–700.

Infectious Disorders, Dublin. Prevalence of infectious disorders among the higher classes in Dublin, *Maunsell* 3275

Inspection of Sewers:

Surrey District.—System of inspection of sewers by surveyors appointed by commissioners, *Drew* 1535–1543.

Tower Hamlets.—Nature of inspection of sewers under control of the commissioners, *Unwin* 1462–1469.

Inspectors, Appointment of. Great advantage to the inhabitants of large towns if an inspector was appointed to enforce the due execution of sanatory regulations, *Rep. p.* xix——System of inspection as to sanatory regulations most decidedly useful, *Evans* 653, *Fletcher* 1664, *Williamson* 1889, *Simpson* 1977, *Duncan* 2417, *Ashton* 2611, *Smith* 2739, *Jenks* 2771, *Pennethorne* 2868, *Hodgson* 2994–2998.

Irish Town, Manchester. State of Irish Town by the Medlock; absence of paving, &c. *Fletcher* 1262——In many parts houses stand back to back, *Fletcher* 1264.

Irish, Birmingham. Superior state of the lower classes of Irish in Birmingham; they are chiefly employed by builders, *Hodgson* 3021, 3022.

Irish Labourers:

Holborn Union.—In this district there are many Irish labourers, who pay no attention to their lodgings; their health is evidently less good than that of persons living in better streets, *White* 391–394——The children, unless very strong, die early; there is much typhus fever amongst them, *White* 395, 396.

Limehouse.—Precarious life of the Irish working at the docks; numbers living together in one house, *Heelis* 328——Injurious effect of their filth and destitution upon the children, *Heelis* 329–332——Small proportion of their children who go to school, *Heelis* 333–337——The board of guardians would be the best authority to prevent these evils, *Heelis* 338.

Saffron-hill, Holborn Union.—The Irish frequently live five or six families together in one room, with a donkey, pigs, or stale fish, *Wilkes* 426.

St. Bartholomew's.—They eat a kind of food which generates disease; they have lower wages than the English, are content with coarser food, and are very intemperate, *Miller* 814. 828–832.

Report, 1840—*continued.*

Irrigation, Edinburgh. Nuisance near Edinburgh of the water from the common sewers used for the purpose of irrigation, *Stodhart* 1992——Practice prejudicial to health, *Stodhart* 1993——A very general opinion that the salubrity of the air is affected by the exhalations, *Stodhart* 2006——Use of water from the common sewers for the purpose of irrigation a great nuisance, *Simpson* 1957——Majority of medical men of opinion that the practice is unwholesome, *Simpson* 1958——Authorities in Edinburgh have reported against the system, *Simpson* 1968——Manner in which the meadows on the east side of Edinburgh are irrigated, *Miller* 3026——Alleged increase of disease in Edinburgh, arising from recent increase of irrigation, *Miller* 3034——No inconvenience, *Miller* 3040——Unpleasant smell arising from the admission of gas-water into the stream that irrigates the meadows, *Miller* 3032——Degree of opposition shown at various times to the plan of irrigation adopted, *Miller* 3047——Provision in the Edinburgh Police Bill relative to the stream that irrigates the meadows, *Miller* 3054——Unfounded allegation of the increase of fever in Edinburgh, owing to the system of irrigation adopted in the neighbouring meadows, *Miller* 3047.

See also *Holyrood House.*

Islington. Number of courts; they are as bad as in London, but have a more free circulation of air, *Moseley* 909–914.

J.

Jacob's Island, Rotherhithe. Is surrounded by open ditches, and is very unhealthy, *Moseley* 1009–1012.

Jenks, G. S. M.D. (Analysis of his Evidence.)—Resident at Brighton, 2747——Has been employed in drawing up a sanatory report for the Poor Law Commissioners, 2748——Considerable number of the poorer and working classes in Brighton, 2752——A great number of the population, chiefly fishermen, inhabit courts, some under arches, others open, 2754–2756——Unhealthiness of houses run up back to back, 2758, 2759——Too many cesspools, and a decided want of underground drainage, 2762, 2763–2768——No inspection; witness informed by clerk to commissioners that there was no authority to interfere, unless a memorial was placed before the commissioners, complaining of a public nuisance, 2771——Commissioners have power to make under-ground drains 2772——Of great use, if commissioners had power to prevent the formation of cesspools, 2773——General wants of the poor as to sanatory regulations, ventilation, good water, sufficient drainage, width of streets, paving, and prevention of houses being built back to back, and no under-ground dwellings, 2777.

Advantages of a general drainage Act, 2779——Public walks necessary, 2779——Public baths for the people, 2779, 2780——There are many schools, and in general there are play-grounds attached, 2781, 2782——Highly prejudicial to the health of towns having burial-grounds in the central parts of towns, 2787——Cemeteries in France not allowed within a mile of the bills of mortality, 2788——At Naples not permitted within two miles, 2788——Choice of places for burial-grounds, 2789——Great advantage to be derived from abattoirs; generally adopted on the Continent, 2792—— Disadvantages of slaughter-houses in crowded populations, 2793.

John's, St., Court, West London Union. Filthy and unwholesome state of this court, raging of typhus fever and small-pox, *Jordan* 145, 146.

John's, St., Street, Bethnal-green. Prevalence of malignant fever in this street; crowded state of the houses, *Smith* 50.

Johnson's Change, Whitechapel. Filthy and unwholesome state of it; prevalence of fever, *Smith* 67.

K.

Kennington Common. Might be improved as an exercising ground, *Wagstaffe* 753–759.

Kensington, Lord. Dilapidated state of property in St. Bartholomew's; it ought to be pulled down, *Miller* 806–810.

Kent-street, Southwark. There is an open ditch; almost every inhabitant had the typhus fever, *Evans* 641–643——It could easily be drained into the common sewer, *Evans* 675–678.

King's-street, St. George's-in-the-East. The temporary abode of sailors; densely populated and very filthy, *Moseley* 968–975.

Report, 1840—*continued.*

L.

Lamb's Fields, Bethnal-green. Described; quantity of stagnant water, and putrid animal and vegetable matter; whole families are swept away by fever, *Smith* 44, 45——State of Lamb's Fields; improvements owing to eastern railways, *Peeke* 2019.

Landlords. Power should be lodged somewhere to prevent landlords from building in swampy places, and to compel them to keep their houses in a state of wholesome cleanliness, *Smith* 35——Class of landlords to whom the houses in the Whitechapel district belong described, *Smith* 78——Neglect of landlords to cleanse their houses; cases in which persons have died of fever from entering an unclean house, *Byles* 244——They get high rents for wretched houses in St. Bartholomew's; they compound for the rates, *Miller* 820–827.

Lea River. Proposed plan for remedying the evil arising from improper sewerage and drainage; the noxious matter should be let out beyond the river Lea, *Cubitt* 3449.

Leeds. Notice of the state of Leeds; remedial measures necessary, *Rep. p.* xi.

Liffey River, Dublin. Inconvenience experienced by the inhabitants of Dublin from the Liffey flooding the houses having sewers communicating with it, *Maunsell* 3266, 3267.

Limehouse District (Stepney Union). Class of population described, *Heelis* 266——Sewerage has been much improved, *Baker* 1558.

Limerick. Miserable state of that portion of the city known as Garryowen, *Maunsell* 3325——Increasing population of that city, *Maunsell* 3351.

Liverpool. Evidence as to the state of the poor population, *Cobden* 1820——In Liverpool many instances in which old houses have been let out to many families; one, in which were five families, was blown down; loss of life in consequence, *Wood* 2241——State of Liverpool; summary of the number of courts in the borough was 2271; number of inhabited cellars, *Wood* 2137, 2138——Accumulation of filth in the streets; decayed vegetables, offal of fish, &c., *Wood* 2165, 2166.

Local Taxation. The courts in Liverpool and narrow streets exempt from local taxation, *Duncan* 2446——Only 900 cottages contribute; their rates paid by the Conservative and Reform associations, *Duncan* 2446.——*See* also *Rates.*

LODGING-HOUSES:

1. *Generally.*
2. *In particular Places.*

1. *Generally:*

Inspection and power of regulation of the humbler class of lodging-houses seems absolutely necessary for the health of the people, *Rep. p.* xx.——Great nuisance of lodging-houses; there is no power of inspection, *Byles* 259–261——Should be under some species of local regulation, or should be annually licensed, *Williamson* 1910.

2. *In particular Places:*

Bartholomew's, St.—Are kept tolerably clean, *Miller* 804, 805.

Birmingham.—Wretched state of the beggars' lodging-houses in Birmingham, *Hodgson* 2991——All houses of this description should be placed under a system of inspection, *Hodgson* 2993——Should be placed under the supervision of the police, *Hodgson* 2997.

Dublin.—Character of the lodging-houses of the lower orders in Dublin and vicinity, *Maunsell* 3282–3289.

Edinburgh.—Filthy state of houses where many strangers lodge; case cited; fevers raging occasioned by the stench from deposits, *Simpson* 1974.

Hull.—State of lodging-houses; general bad character of these places, *Wood* 2350——No sanatory regulations as to lodging-houses; inspection ought to be made, *Wood* 2356–2358.

Leeds.—Great number of lodging-houses; their condition dirty, crowded, neglected, and ill-ventilated, *Williamson* 1790–1793——Many proofs of the diffusion of malignant disorders from the lodging-houses, *Williamson* 1797——Number has much increased; regulations proposed, *Williamson* 1916–1925.

Liverpool.—Wretched state of lodging-houses; worse than courts; thirty or forty persons often collected in one house, *Duncan* 2460——State of lodging-houses, *Duncan* 2480——Lodging-houses should be subject to sanatory regulations; should be inspected periodically, *Duncan* 2487.

Southwark.—Their neglected and filthy state, *Evans* 626, 627.

Report, 1840—*continued.*

London. State of St. Giles, Essex-street, Spitalfields, Farringdon-street, Saffron-hill, &c.; many miserable courts; houses back to back; cottages of two rooms; ladders for staircases; dirty and filthy; entrance by archways; close, and badly ventilated, *Pennethorne* 2797–2804.

See also *Bartholomew*, St. *Bethnal Green. Building Act. Burial Grounds. Cesspools*, Lambeth. *Clements*, St. *Commercial Road. Courts. Disease. Draining. Fever. Mortality. North West of Olave*, St. *Paving. Poor. Poplar. Schools. Sewers. Whitechapel.*

Long-acre and South-street. District bounded by those streets; prevalence of typhus fever, *Moseley* 857–860.

Lynch, Jordan, M. D. (Analysis of his Evidence.)—Medical officer of the West London union, 131——His opinion coincides with that of Dr. Southwood Smith, as to the causes of fever, 132–134——Places included in the West London union; population of the union, 135–137——Numerous cases of typhus fever in Back Bear-alley; want of ventilation and drainage; the city of London have made sewers, and not a case has since occurred, 138–144——Filthy and unwholesome state of Green Dragon-court and St. John's-court; raging of typhus fever and small-pox, 145, 146——Elliott's-court, Dean's-court, Phœnix-court, 147——Some of the courts have no thoroughfare, are very narrow, and a family occupies every room, 148, 149——Defective drainage in New-street, St. Bartholomew's; open sewers an accessary cause of fevers, 151, 152 ——The Fleet-ditch is open for nearly a mile from Snow-hill to Clerkenwell-green; the back windows of the houses occupied by the working classes open directly upon it; all the sewers are emptied into it, 153, 154.

There is a good supply of water twice a week, which carries away the refuse, 155–158——Mass of misery and impurity existing from the back of Aldersgate-street to Golden-lane, and thence to Bethnal-green, 159——An improvement in the sewerage would improve the health of the poor, and save an expense to the parish, 160, 161—— They are chiefly poor labourers; many of them Irish, 162, 163——Four women and two men were sleeping in a very small room, 164, 165——Amount expended on the poor in St. Sepulchre's parish, 166——Fever has extended from Back Bear-alley to other places, 167——Mortality from fever, small-pox, and cholera, 168–174——Typhus fever is never away from Field-lane; the Fleet-ditch runs through it; low description of inhabitants, 175.

Lyons. Escape of that city from the cholera; attributed to the lime-kilns, *Symons* 1168–1170.

M.

Malaria. Dampness and fog are powerful causes of it, *Smith* 119–122.

Manchester. State of Manchester as to condition of working classes; sewers, drains, cellars, cleansing, *Rep. p.* x——State of working classes, *Cobden* 1811——Those parts under commissioners are as well cleansed and soughed as any town of the same magnitude in the kingdom, *Cobden* 1831.

Manufactories. Proximity to manufactories, especially bone-boilers and manure manufactories, is very unwholesome, *Moseley* 945–951——If injurious to health, they would be indicted in a district occupied by wealthy persons, *Moseley* 1055–1060.

See also *Factories.*

Manure. System of saving the manure formerly by means of laystalls, *Cubitt* 3452.

Martin, Mr. His plan of drainage does not go far enough, *Cubitt* 3448.

Martin's-court, Whitechapel, There is no sewerage in this street, *Peeke* 2014.

Martin's, St., Lane. District between St. Martin's-lane and Bedford-court; imperfect sewerage; closeness of the houses, &c., *Moseley* 856.

Maunsell, Henry, M. D. (Analysis of his Evidence.)—A physician, residing in Dublin, 3168——Construction of the courts inhabited by the lower orders in Dublin, 3172—— Prevalence of cellar dwellings, and their unhealthy state, 3176-3180——Very frequently the inmates are obliged to have pumps for the purpose of removing the refuse water, 3182——Prevalence of fevers in cellars, 3184——Want of ventilation in courts and alleys from building the houses back to back, 3185——There is no Building Act applicable to Ireland, 3188——Power of the Dublin Wide-street Commissioners to regulate buildings, 3190——Imperfect state of the sewerage of Dublin, 3193——The majority of the courts and alleys are destitute of drains, 3194——Neglected state of that portion of the city of Dublin inhabited by the poorer classes, 3196-3200——Many of the houses have no privies, and those that have privies never have them cleansed or emptied, 3201 ——No receptacle whatever for dust and ashes in the poorer class of houses, 3204—— Description of the habitations of the poor in Cole-alley, Dublin, 3208.

Report, 1840—*continued.*

Maunsell, Henry, M. D. (Analysis of his Evidence)—*continued.*

Accumulation of filth in the streets inhabited by the lower orders, and injury done to the health of the inhabitants in consequence, 3209——Description of Gill's-square, 3209——How fevers and contagious disorders are promoted by the neglected state of the district occupied by the lower orders, 3213——Wretched state of the dwellings in Rainsford-street, 3215——During the prevalence of the cholera many of the inmates of the cellars were ejected, but have since returned, 3216, 3217——Description of Robert-street and Thomas-court, and prevalence of disease therein, 3221——Prevalence of fevers in the poorly inhabited districts of Dublin, 3222–3235——Powers of the commissioners of paving in Dublin, and reason why the system of drainage is defective, 3237–3244——Landlords are required to provide sewers communicating with the main sewer, under a penalty of 20 *l.*, 3238——Mode of assessing the rates for constructing sewers in Dublin, 3245. 3248——Class of persons composing the Board of Commissioners in Dublin, 3250——The commissioners do not possess sufficient inquisitorial power, and are also deficient in funds, 3253.

The commissioners have no power to assess the district for support of a sewer, but only the inhabitants of the street through which it runs, 3258, 3259——40,000 *l.* were granted to the Paving Board out of the Consolidated Fund, half of which went towards the construction of sewers, 3259——Amount in the pound of the paving rate in Dublin, 3261——Neglected state of the streets occupied by the lower orders; those occupied by the better classes are properly cleansed, 3265——Nuisance arising from the stench from the Liffey at low-water, 3267——Power of the Ballast Board to prevent animal and vegetable matter being cast into the Liffey, 3270——The humbler classes are the great sufferers from want of drains, 3273——Prevalence of infectious disorders among the higher classes in Dublin, 3275——Insufficiency of the supply of water in Dublin, 3276——How the poor suffer in consequence, 3281——Character of the lodging-houses of the lower orders in Dublin, 3282–3289——Power of the Lord-lieutenant to establish boards of health in large towns, 3295–3298——Appointment of officers of health in several of the parishes in Dublin, 3298–3300——The appointment of a board of health to carry out sanatory regulations would be a very valuable provision, 3301——Manner in which it might be effected, 3303–3306——Operation of the New Poor Law in Dublin; number of unions formed, &c. 3307–3312.

Board of Health should have power to compel the Paving Board to remove nuisances, 3315——Character of the nuisances chiefly complained of in Dublin, 3316——Nuisance arising from burial-grounds in Dublin, 3319——No such thing as baths in that city, 3320——Necessity for legislative measures being also taken with respect to Cork, Limerick, and Belfast, 3323——Population of Dublin in 1831, 3327——Defective supply of water in Dublin; proposed remedies, 3328——Proposed powers to be given under a Building Act, 3329–3341——The expense of the proposed sanatory regulations should be defrayed by the Government and the public, 3345——Almost all the large towns in Ireland are governed by local Acts, 3348——Increasing population of Limerick, 3351——Existence of schools in Dublin without play-grounds, 3355——Absolute necessity of places of exercise to the health of children, 3358——Deterioration of the race of human beings from living constantly in confined situations, 3361——The neglect of cleanliness and the decencies of life tends greatly to demoralize the inhabitants of courts and alleys, 3365.

Description of vaults inhabited by the poorer classes in Dublin, 3368——Proposed constitution of a board of health, 3375——How it should be supported, 3377, 3378——Powers proposed to be given to the board, 3378——Opportunity for jobbing by local boards, 3385——The central board should exercise a superintending power over the local boards, 3394——The powers of the central board should be as little executive as possible, 3396.

Measles. Often appear in a most aggravated form from the dirt and misery of the residences of the poor, *Wood* 2249.

Medical Police. Great want of a good medical police in London, *Walker* 3156.

Mendicity Society, Dublin. Number of persons usually on the books of this institution; manner in which it has been interfered with by the New Poor Law, *Maunsell* 3282.

Metropolitan Police Courts Act. Beneficial clause in it, enabling the guardians to summon the owners of houses before magistrates to cleanse their property, *Wilkes* 430——Nature of the powers under that Act for the abolition of nuisances, *Hodgson* 3007.

Metropolis Sewerage. Objections to several clauses of the Bill before the House for the improvement of the metropolis sewerage, *White* 2591.

Miller, S. (Analysis of his Evidence.)—Relieving officer of the West London North District 791——It surrounds Smithfield; it is densely peopled with the lower class of Irish, 792, 793——St. Sepulchre parish consists of 8,000 souls, and only 650 rate-payers,

Report, 1840—*continued.*

Miller, S. (Analysis of his Evidence)—*continued.*

payers, 794——It is well cleansed, but the habits of the people in the courts and alleys render it impossible to prevent an accumulation of filth, 795——Neglect of drainage in St. Bartholomew the Great; filthy state of New-street and Middle-street, 796——Stagnant cesspools; difficulty of getting them cleansed, 797——Prevalence of fever; great expense to the parish, 799, 800——In Back Ball Alley, there is neither drainage nor ventilation; every room is occupied by a family; number of fever cases, 800–803——The lodging-houses are kept pretty clean, 804, 805——Many of the houses should be pulled down; the property belongs to Lord Kensington, 806, 807——The health of the metropolis will be affected; the houses are tumbling down, 808–810.

There should be some superior interference, 808——Fever has increased, 811–813——The Irish eat a kind of food which generates disease, 814——The habits of the people have been more sober lately; the shutting up public houses on Sunday mornings has been very beneficial, 814, 815——There should be some power to prevent families from entering infected houses before they have been whitewashed, 816, 817——The landlords get high rents for wretched houses, 818, 819——They compound with the parish for the rates, 820–827——The Irish have lower wages than the English, and are content with coarser food, 828–838——They are very intemperate, 832——The poor generally cook their victuals at home, 833.

Miller, William Henry, M.P. (Analysis of his Evidence.)—For 36 years residing near Edinburgh, 3025——How the Meadows on the east side of Edinburgh are irrigated, 3026——Occasion of an action being brought by Mr. Duncan of Restalrig against the tenants of the proprietors of the stream to restrain them from irrigating their lands, 3028——Alleged increase of disease in Edinburgh, arising from recent increase of irrigation, 3034——Not the slightest inconvenience as to the health from the system of irrigation adopted, 3040——Opinion of Dr. Hamilton, senior, an eminent physician of Edinburgh to that effect, 3041——Unpleasant smell arising from the admission of gas-water into the stream that irrigates the Meadows, 3032——Introduction of a clause to prevent gas refuse from running into the stream, 3044——Absence of cholera from the village of Restalrig, 3046——Opposition shown at various times to the plan of irrigation adopted, 3047——Health of the inhabitants of Edinburgh compared with the health of the inhabitants of Glasgow, 3049–3051——Provision in the Edinburgh Police Bill relative to the stream that irrigates the Meadows, 3054.

Mint, The, Southwark. Is crowded with dilapidated houses, choked up for want of ventilation, *Evans* 623–626——Filthy state of the courts and alleys; neglect of drainage; open ditches, &c. *Evans* 628–652.

Moorgate and *Bishopsgate.* Want of drainage; density of the population; quantity of courts and alleys, *Moseley* 889–895.

Moors Court, Whitechapel. There is no sewerage in this court, *Peeke* 2014.

Morals of Working Classes. The neglect of cleanliness and the decencies of life tends greatly to demoralize the inhabitants of courts and alleys, *Maunsell* 3365; *Cubitt* 3419——Much improved in London, *Cubitt* 3440.

MORTALITY:

1. *Generally.*
2. *In particular Places.*

1. *Generally:*

From fever, small-pox, measles and cholera, *Jordan* 168–174——Evidence as to the mortality of children in large towns, *Williamson* 1933–1936.

2. *In Particular Places:*

Glasgow.—Rate of mortality; great increase, of late, as stated by Dr. Cowan, *Symons* 1089–1110–1116. 1134, 1135.

Limehouse.—The principal mortality is amongst the children, on account of the miserable dwellings, *Heelis* 309.

Liverpool.—Great mortality occasioned at Liverpool by the dreadful state of the narrow streets and courts, *Duncan* 2406——Mortality in various years before and since the Registration Act, *Duncan* 2427, 2428.

London.—The mortality in London is in proportion to the filth and the density of the population, *Moseley* 1038——Great mortality in Clement's-lane, Strand, *Walker* 3153, 3154.

Moseley, J. (Analysis of his Evidence.)—Has been in the medical profession and paid attention to the state of the poorer classes, chiefly in St. John's and St. Margaret's, Westminster, 834–837——Boundaries of the district in which the poor reside, 840, 841——Neglect

Report, 1840—*continued.*

Moseley, J. (Analysis of his Evidence)—*continued.*

——Neglect of sewerage; open drains; negligence of scavengers, 842–850——A number of alleys, running from York-street and Castle-street, are filthy and unwholesome, 854–855——District between St. Martin's-lane and Bedford-court; imperfect sewerage; closeness of the houses, 856——District between Long Acre and South-street; prevalence of typhus fever there, 857–860——There are sewers to the main streets, but no means of communication with them, 861–863——Populous district of St. Giles, between Holborn on the north and Parker-street on the south, 864–866——More than one family often occupy one room, 867——Filthy state of the district between Broad-street, Titchfield-street, Crown-street, and King-street, 870——Accumulation of filth and neglect of privies, 871——The people are enfeebled by the polluted atmosphere and more disposed to disease, 872–875.

State of George's Rookery, by Mutton-hill and Clerkenwell-green, 876——Fleet-ditch is often in a filthy state, and very productive of fevers, 877–879——The whole district is a hot-bed for fever, 881, 882——The district between Golden-lane and Bunhill-row is very populous, and there are a number of burial grounds, which are very injurious to health, 883–888——Parts of Moorgate and Bishopsgate inhabited by the poorest classes, 889–890——Want of drainage, 891, 893–895——It consists entirely of courts and alleys, 892——The effluvia affects the health of the people imperceptibly to them, 896–899——District by Rosemary-lane and East Smithfield proverbial for fever and filth, 901, 902——On the Southwark side of the river the air is also vitiated by manufactories, 904——District near Gray's Inn-lane and the Small-pox Hospital; defects of drainage, 907, 908——Number of courts in Islington; they are as bad as in London, but have a more free circulation of air, 909–914——People are more healthy in the neighbourhood of unenclosed grounds, 915.

The density of the population is in proportion to its poverty, 916–922——The whole of London is liable to infection from some neighbourhoods, 923–925——Existing regulations are inefficient to enforce drainage, 926——The comforts of the poor in these places are diminishing as the population becomes more crowded, 928–932——The constitution of children would not be affected by the habits of their parents unless actual disease had been engendered, 933–944——Proximity to manufactories, especially some boilers and manure manufactories, is very unwholesome, 945–951——Instruction would give the poor a disposition to avail themselves of advantages offered; a bad atmosphere deadens their faculties, 952–955.

[Second Examination.]—Neglected state of parts of St. George's-in-the-East, inhabited by sailors, 957–962——The sewerage is defective and the surface imperfectly drained, 963, 964——There are heaps of decomposing vegetable matter and offal; the scavenger is seldom there, 964–965——The privies and cesspools are much neglected, 966, 967——King-street and Green-bank, the temporary abodes of sailors, are densely peopled and very filthy, 968–975——Fever, and all other diseases, are either caused or aggravated by the state of the place, 976–981——Shadwell, also, on the river side, is in the same state, 982–991——Filthy and densely peopled district of St. George's-in-the-East and Wapping, 992–997——Peculiarly unhealthy situation of Rotherhithe; malaria arising from the Mill-pond, 998–1003——There is no drainage but by open ditches, 1004–1008——Jacob's Island is surrounded by them, and is very unhealthy, 1009–1012.

Evils arising to the shipping from crews being taken from unhealthy places on the river side, 1013–1015——Necessity of removing the bones from the bone-boilers' yards, in a dense population, where they are decomposed for manure; noxious gases evolved, 1016–1034——The mortality of London is in proportion to the filth and the density of the population, 1038——There are lodging-houses for sailors in a very crowded state, 1039–1043——The "Sailors' Home," 1044–1046——Public baths could be supplied with water at a small expense, 1044–1055——Manufactories injurious to health would be indicted as nuisances if the district were occupied by wealthy persons, 1056–1060.

Municipal Government. Disadvantageous manner in which population has been crowded into large towns, without any municipal government, *Fletcher* 1313.

Mutton-hill and *Clerkenwell-green.* Neglected state of St. George's Rookery in that neighbourhood, *Moseley* 876.

N.

Nag's Head Court, Drury-lane. Filthy state of this court; the unhealthiness of the inhabitants, *Walker* 3118, 3464.

New-court, Whitechapel. No sewerage in this court, *Peeke* 2014.

New-street, St. Bartholomew's. Defective drainage of it; open sewers an accessary cause of fever, *Jordan* 151, 152.

North-street, Bethnal-green. Collection of filth, and dreadful stench in this street, which is occupied by pig-dealers, *Smith* 49.

New-streets, Liverpool. Great advantages would arise from opening new streets, and carrying them through densely populated districts, *Duncan* 2538.

Report, 1840—*continued.*

Newman, John. (Analysis of his Evidence.)—Surveyor of district of sewers on Surrey side, 2086——No power to compel owners of houses to communicate with drains, 2089——Or to prevent them from sinking cesspools and receptacles for filth below the level of the sewers, 2090——Many owners neglect to communicate by underground drainage with the sewers, 2093——Injurious effects arising from this cause, 2094——Very desirable that power should be given to compel persons to communicate by underground drains with the sewers, 2096——The cholera much extended in witness's district, from the filth of the district, thirty or forty persons living in houses in the filthiest state, 2099——Extent of witness's district, 2102——Sewer constructed, a year since, in Camberwell, of a mile long, at the urgent request of inhabitants; only one application been made for an opening into the sewer, 2102——Desirable that there should be a power of compelling communications, 2104.

A great many populous districts in which there are no sewers, 2111——Advantage to health of underground drainage, 2113——Under the present regulations, the sewerage of small houses very much neglected, 2118——Unwillingness of landlords to incur expense in forming drains to sewers, 2117. 2120——Sewer at Camberwell brought up to a certain point, to drain a stagnant pool; inhabitants have not availed themselves of it, 2119——No waterworks in Rotherhithe; inhabitants supplied from sewers; disinclination on this account to make new sewers, 2121——Expenses of sewers in this district; their effect in draining the land, a benefit to the houses generally, 2126, 2127——A sewer about to be executed 900 feet in length, surrounding the property of Guy's Hospital, arched over, partly at the expense of the hospital, partly at that of the commissioners, 2129.

Night Carts. Nuisance arising from them, and promotion of disease by means of them, *Walker* 3483, 3484.

North Ward, Hull. State of the courts in that district, *Wood* 2332.

North Ward, Leeds. Bad state of the North Ward, Leeds, *Williamson* 1676.

North-east Ward, Leeds. Bad state of the North-east Ward, *Williamson* 1683.

North Myton District, Hull. State of the courts in that district, *Wood* 2324–2331.

North-west of London. Is the healthiest part, as the prevailing winds are south-west and north-east, *Dr. Arnott* 563.

Norwood. The health of the children in the workhouse of the Holborn Union is very good; better than when they were at Norwood, *White* 398–401.

Nuisance. Under the new Police Act, the district surveyor is liable to a penalty if a nuisance is not removed when pointed out to him, *Byles* 184——The surveyor of pavements is the only person who has power to remove nuisances, *Byles* 239. 243——In all cases of nuisance the landlord should be held responsible, the tenants in many cases being too poor to remedy the evil complained of, *Hodgson* 3007.

See also *Cesspools. Night Carts. Privies.*

O.

Olave's, St., Union. Is chiefly inhabited by the working classes, who obtain a precarious livelihood from the wharfs, *Clarke* 445——The Greenwich Railway intersects the district, *Clarke* 447——Population of the district; proportion of the working classes, *Clarke* 448, 449. 453–455——Their mode of life predisposes them to fever, *Clarke* 456, 457——Sickness is very prevalent among the children, *Clarke* 473.

Open Gutters. Are very injurious to health, *Evans* 655-659.

Oxford. Bad state of the swillage drainage in that city, *White* 2576.

P.

Paddington. Bad state of the drainage from Paddington to Chelsea, *Cubitt* 3449.

Party Walls. Regulations under the Building Act for making party walls, *Cubitt* 3414.

Pauper Children. Most beneficial and humane regulation to send all pauper children out of town to school, in all large towns, *Williamson* 1941–1945.

PAVING:

1. *Generally.*
2. *In particular Places.*

1. *Generally:*

Evils arising from streets being unpaved, *Smith* 106, 107——Necessity of paving all courts and alleys, *Dr. Arnott* 507——Any new Act as to drainage, &c. should include powers to enforce paving the surface of courts and streets, *White* 2588——Any new Building Act should make provision for paving courts, &c., *Pennethorne* 2849.

2. *In particular Places:*

Ashton; Staleybridge; Dukinfield: All paving is optional, except the public roads, which are done under the Turnpike Acts, *Ashton* 2612.

Report, 1840—*continued.*

PAVING—continued.

2. *In particular Places.—continued.*

Bradford.—Paving attended to in Bradford, but not in the suburbs, which are the largest portion of the town, *Ellison* 1598.

Olave, St.—It is the duty of the commissioners of pavements to see that the courts and alleys are properly cleansed, *Clarke* 469–472.

Saffron-hill.—At the time of the cholera there was a general cleansing of the parish (Saffron-hill) by the paving board, *Wilkes* 439.

Peeke, James. (Analysis of his Evidence.)—Surveyor of the Tower Hamlets, 2007——There is no sewer about Virginia-row; none nearer to it than Prince's-street, 2012——Wretched state of the inhabitants, 2013——The land excavated for brickmaking, so that sewers are hardly available; parts of Whitechapel in which there is no sewerage, 2014——The district alluded to, the filthiest imaginable, 2014; and very densely populated, 2015——State of Lamb's-fields; improvements owing to Eastern Railway, 2019——Mode of application to commissioners of sewers; in some cases proprietors of land pay the expense; where the public would derive a benefit, the commissioners have borne a portion, 2023——Commissioners have no power of preventing the making receptacles for filth below the level of the sewer, 2024——Nor any power to compel communications from houses to sewers, 2024——Sewers have not all the effect which is attributed to them, 2028——Filthiness of the inhabitants of the district, 2030——Commissioners endeavouring to lay down sewers in all the great thoroughfares, 2032.

Persons who erect houses cannot use drains without leave of commissioners, 2033–2035——Owners of property have nothing to pay for the privilege of communicating with the main sewer, 2039——There are many streets in which sewers are situated and the inhabitants neglect to take advantage of them, 2041——Mode of rating to sewers rate, 2045. 2049–2073——Houses situated in streets without sewers are rated, 2048——Tide cannot rise in drains, unless by accident; there are sluicekeepers appointed, whose business it is to attend to valves, 2074——Extent to which excavations are carried; brick clay and gravel removed; districts left in holes; this state of things a public nuisance; commissioners of sewers no power to prevent, 2080–2085.

Pennethorne, James. (Analysis of his Evidence.)—Has been professionally engaged in surveying buildings for some years past, 2794——Acquainted with the construction of buildings in all parts of the metropolis, 2795——Has surveyed St. Giles's, Essex-street, Spitalfields, and parts of Farringdon-street, round Field-lane and Saffron-hill, 2796——Miserable courts of which these districts are composed; houses back to back; cottages two rooms; ladders for staircases; dirty and filthy, 2797——Entrances by archways; close and badly ventilated, 2798, 2799. 2804——No underground drainage of any kind to St. Giles and Spitalfields districts, 2809——Drainage, north of Farringdon-street, by an open ditch, 2809—— Drained by surface drains, 2810——State of Rose-lane, Spitalfields, 2810——There is no system of inspection, 2812——Disgusting state of privies; one only to each court, 2816. 2819——Houses continually built against back premises of others; nothing to prevent it, 2825–2828——London Building Act; its powers, 2828——Desirable to have a general Building Act, that should lay down general regulations to prevent such forms of construction as are injurious, 2831——Close courts should not be allowed, 2835——Building back to back should be prevented, 2837.

Cellar dwellings should be forbidden, 2838——No dwelling should be erected of greater height than the width of the street, 2843——Every house should be provided with a privy, and be well ventilated, 2849——There should also be provision for paving, 2851——There should be a general Drainage Act; commissioners appointed by ratepayers, 2856——Commissioners of Sewers cannot compel inhabitants to use sewers, 2858——Ought to have power to prevent sinking cesspools below the level of the sewer, 2859——Power to enforce emptying into drains, and to have traps on drains, 2863*——There should be inspection to enforce cleanliness, 2868, 2869——Power should be given to enforce the Act, 2871——Supply of water should be especially regarded, 2873, 2874——Nuisances, as slaughter-houses, bone-boiling, &c., should be put down by law, 2880——Plan of the Rookery, St. Giles, 2880——Plan of courts between Whitechapel and Wentworth-street, 2883——Very little good to be done by schools and prison discipline while these districts are left in the dreadful state they now are, 2884, 2885——Commissioners should make great lines of sewers through every district on which buildings stand or are about to be erected, 2090.

Picket-place Station-house, Strand. Unwholesome state of the house from the deterioration of the water, *Walker* 3150.

Piershill Barracks, Edinburgh. Healthy state of those barracks; the average cases of sickness and mortality in the cavalry barracks of Glasgow and Hamilton are 25 per cent. more than at Piershill, *Miller* 3051.

Report, 1840—*continued.*

Pigs. The practice of keeping pigs in dwelling-houses should be put a stop to, *Hodgson* 3005.

Play-Grounds:

1. *Generally.*
2. *In particular Places.*

1. *Generally:*

Witness never recollects a school for the working classes with a play-ground, *Wood* 2231——Advantages of play-grounds to the health of towns, *Hodgson* 3018——Are extremely essential to the health of children, *Walker* 3165.

2. *In particular Places:*

Birmingham.—No play-grounds whatever attached to any of the schools for the poor *Wood* 2308, 2309.

Bolton.—Schools in Bolton are without play-grounds, *Ashworth* 1849, 1850.

Brighton.—Generally play-grounds attached to schools, *Jenks* 2781, 2782.

Hull.—No play-grounds at all the schools, *Wood* 2349.

Leeds.—With the exception of the infant school, no schools in Leeds have play-grounds, *Williamson* 1736.

Police Act. See *Metropolis Police.*

Police Act, Edinburgh. No power in the Act to abate the nuisance of the irrigation which is pursued by using the water from the common sewers, *Stodhart* 2000——Provision relative to irrigation, *Miller* 3054.

Poor Law, Dublin. Operation of the New Poor Law in Dublin; number of unions formed, &c. *Maunsell* 3307–3312.

Poor Rates:

St. Olave's.—The poor-rates have been reduced more than one-half in the last year, *Clarke* 500.

Whitechapel Union.—Much expense is cast upon the poor-rate by the sickness of the poorer classes; if the causes were removed a great saving would be effected, *Byles* 185–190.

Poplar District of Sewers. Evidence as to extent; mode of management, &c., *Baker* 1548.

Portpool-lane, Holborn Union. Improvement effected in that street by Messrs. Reid *White* 369–374.

Portugal-street, Lincoln's-inn-fields. Injury done to the health of the inhabitants from the effluvia arising from the burial-ground in that street, *Walker* 3141.

Privies:

Birmingham.—Should be under a sort of supervision, being in a very bad state in some parts of the town, *Hodgson* 3005.

Drury-lane.—Description of a privy in Nag's Head-court, Drury-lane, the floor of which is ankle deep in filth, *Walker* 3119.

Dublin.—Many of the houses of the poorer classes have no privies, and those that have are never emptied or cleansed, *Maunsell* 3201.

Giles, St.—Disgusting state of privies in St. Giles; only one to each court, *Pennethorne* 2816–2819——Neglected and filthy state, *Moseley* 871.

Glasgow.—In some of the courts there are none at all, *Symons* 1147–1151.

Lambeth.—In some houses are in the cellars, *Wagstaff* 700.

Liverpool.—Disgusting state of privies in the courts inhabited by the labouring poor, *Duncan* 2401——Disgusting state of the privies; only one to a great many houses, *Wood* 2171.

The Mint, Southwark.—Their neglected and dangerous state, *Evans* 649, 650.

Spitalfields.—Disgusting neglect of privies; a great source of typhus fever; improvement of Wentworth-court in this respect, *Byles* 258, 259.

Report, 1840—*continued.*

Public Walks:

1. *Generally.*
2. *In particular Places.*

1. *Generally:*

Open spaces should be preserved, calculated for public walks, essential to the health and comfort of the poorer classes, *Rep. p.* xx——People are more healthy in the neighbourhood of uninclosed grounds, *Moseley* 915——Working classes stand in great need of some places on which they could get out to take exercise and promote health, *Fletcher* 1240——Want of open spaces applies to all large towns, *Fletcher* 1241——Importance of providing airing grounds for the lower orders, *Cubitt* 3423.

2. *In particular Places:*

Brighton.—Necessary for the people, *Jenks* 2779.

Holborn Union.—Public walks in this district would promote the health of the inhabitants, *White* 386–390.

Macclesfield.—Has no space left for public walks, *Fletcher* 1241.

Manchester.—Entirely devoid of any space for the recreation of the working classes, *Fletcher* 1241.

Liverpool.—There are no reserved places for the poor to exercise in except St. James's Park, and the two cemeteries, and the pier-head, *Duncan* 2494–2497.

London, East.—The open spaces in the east of London are not healthy, bei ng full of ditches and stagnant water, *Dr. Arnott* 595–597.

Punderson's Gardens, Bethnal-green. Disgusting condition thereof described; prevalence and fatal character of fever described, *Smith* 41.

R.

Ratcliff Highway.—Disgusting state of parts thereof; prevalence of fever, *Dr. Arnott* 517–520.

Rainsford-street, Dublin. Description of the dwellings of the poor in that street, *Maunsell* 3215.

Rates, Local. Considerable saving would arise from better sanatory regulations, *Fletcher* 1290, 1291——Sanatory regulations would be a great saving to the rates of a parish, *Ellison,* 1610——Great expense thrown upon richer classes owing to illness and fevers, generated by general neglect of the precautions mentioned, *Williamson* 1720——Good regulations as to health of towns should no doubt tend to lower rates, *Smith* 2703.

See also *Local Taxation.*

Read-street, Bethnal-green. Families live in the cellars and kitchens of undrained houses; fever is never absent, *Smith* 54.

Recreation Grounds. See *Public Walks.*

Rheumatism. Prevalence of rheumatism in the crowded lanes, courts, and cellars of Liverpool, *Duncan* 2471–2475.

Restalrig, near Edinburgh. Healthy state of the village, owing to the irrigation of the meadows, *Miller* 3028.

River Side, Lambeth. The people being close to the river, are subject to intermittent fevers; filth thrown upon the mud; their unwholesome diet, *Wagstaffe* 729, 730——Evils arising to the shipping, from crews being taken from the unhealthy and infected places of the river side, *Moseley* 1013–1015.

Robert-street, Dublin. Description of the habitations of the poor, and prevalence of disease therein, *Maunsell* 3222. 3235.

Rookery, St. Giles. Plan of the courts and streets composing the Rookery in St. Giles, *Pennethorne* 2880.

Rosemary-lane. District proverbial for fever and filth, *Moseley* 901, 902.

Rotherhithe. Its peculiarly unhealthy situation; malaria arising from the mill-pond, *Moseley* 998–1003——No waterworks in Rotherhithe; inhabitants supplied from sewers; disinclination on this account to make new sewers, *Newman* 2121.

Report, 1840—*continued.*

Royal Manor, Coventry. Formerly an open space, used for recreation, now enclosed; property of Marquis of Hertford, *Fletcher* 1238.

Russell-court, Drury lane. Injury done to the health of the inhabitants from the effluvia of the burial-ground, *Walker* 3142.

S.

Saffron-hill, Holborn Union. Is very unhealthy; with the exception of Fleet-ditch, there is no drainage near it, *Wilkes* 414——General want of drainage throughout the district, *Wilkes* 415——Dreadful state of the courts round Saffron-hill, which were investigated during the cholera, *Smith* 2643——Description of the wretched courts which are to be found in this district, *Pennethorne* 2797.

Salford. State of working classes, *Cobden* 1811.

Sanatory Regulations. Some general regulations absolutely necessary, *Ellison* 1604——Absolutely necessary in large towns; scarcely any large towns which do not prove the fact, *Fletcher* 1658——A complete system to secure draining, cleansing, paving the streets, and the proper construction of dwelling-houses, most desirable, *Fletcher* 1660——No adequate provision at present exists to enforce sanatory regulations, *Williamson* 1715——Very opprobiously neglected, *Williamson* 1723——General necessity for some legislative enactment, conferring powers for the purpose of sanatory regulations, *Williamson* 1807——Highly desirable to have regulations as to buildings, sewerage, &c. in all crowded populations, *Ashworth* 1844–1846——Drainage and sanatory regulations absolutely necessary, *Williamson* 1876——Sanatory provisions highly necessary to the health of the lower orders, *Wood* 2235——General wants of the poor as to sanatory regulations, ventilation, good water, sufficient drainage, width of streets, paving, and preventing houses being built back to back, and prevent underground dwellings, *Jenks* 2777.

See also *Cesspools. Drains. Guardians,* Board of. *Gutters. Inspection. Landlords. Privies. Rates. Sewers.*

Scarlet Fever. Very prevalent among the poor of Liverpool; diseases more virulent owing to the state of the parts of the town inhabited by the poor, *Duncan* 2433, 2434——Disease much aggravated by the wretched state in which the poor live in large towns, *Wood* 2249.

Scavengers. Necessity of an effective service of scavengers to remove offal, *Dr. Arnott* 510——There are no regulations for it, *Smith* 108——Never penetrate into the courts in Westminster, *Weld* 1220–1226.

See also *Cesspools. Cleansing. Drains. Dublin. Sanatory Regulations.*

Shacklewell-street, Bethnal green. Closely and densely populated; prevalence of malignant fever, *Smith* 51.

Schools:

1. *Generally.*
2. *In particular Places.*

1. *Generally:*

In some towns there are regulations for sending the pauper children to school at a distance from the town, *Wood* 2199——Very little good to be done by schools while whole districts are left in the dreadful state in which the poor live, *Pennethorne* 2884.

2. *In particular Places:*

Birmingham.—General state of schools in Birmingham; 23,176 children who were receiving no education at Sunday or day schools, *Wood* 2295——In confined situations, small rooms, close, and ill ventilated, *Wood* 2300–2302——Prevalence of schools with play-grounds attached to them in Birmingham, *Hodgson* 3017.

Brighton.—Many schools at Brighton, and in general play-grounds attached, *Jenks* 2781, 2782.

George's, St., Southwark.—School accommodation; the school children are the healthiest and most cleanly, *Evans* 662–671.

Hull.—Description of dame and day schools, *Wood* 2348.

Leeds.—Several large public schools for the working classes in Leeds; day schools and Sunday schools, *Williamson* 1735.

London.—Vast number of schools about Drury-lane without any play-grounds, *Walker* 3161.

Olave's, St., Union.—Very few children go to school, and those who do suffer from the filth and evil example of their homes, *Clarke* 474–478.

Report, 1840—*continued.*

Schools—continued.

2. *In particular Places*—continued.

Spitalfields.—The efficiency of schools is much diminished by the condition of the children's homes, *Byles* 218–220——There is no play ground to the schools, except to Hare-street-fields British school, *Byles* 221.

Stepney Union.—Management of it; healthiness of the children; they are taught to work, and have gymnastic exercises, *Heelis* 313–322.

See also *Dame Schools. Day Schools. Education.*

Scotland Road, Liverpool. Miserable condition of the schools round Scotland-road, *Wood* 2183.

Sepulchre's, St. Amount expended on the poor in St. Sepulchre's parish, *Jordan* 166——The parish consists of 8,000 souls, and only 650 rate-payers, *Miller* 794——The parish is well cleansed, but the habits of the people make it impossible to prevent an accumulation of filth, *Miller* 795.

Sewers:

1. *Generally.*
2. *Necessity for a General Act.*
3. *Present and proposed Power of Commissioners.*
4. *Communication with Sewers.*
5. *Regulations for Application to communicate with Sewers.*
6. *Increase of.*
7. *Uncovered Sewers.*
8. *In particular Places.*

Aldersgate-street.
Birmingham.
Bolton.
Drury-lane.
Dublin.
Edinburgh.
Giles, St.
Hull.
Leeds.
Limehouse.
Liverpool.
Manchester.
Poplar.
Southwark.
Surrey District.
Tower Hamlets.

1. *Generally:*

Administrative authority recommended for drainage and sewerage, without incurring the expense and delay of an Act of Parliament, *Rep. p.* xix.——A great many populous districts in which there are no sewers, *Newman* 2111——Parishes could not make the sewers at their own expense; they should be assisted by the public, who are now endangered by the spread of disease, *Smith* 98–105. 114–116——Extreme deficiency of sewerage generally admitted, *Williamson* 1695——Difficulty of making sewers arises generally from want of money; the expense ought to be spread over as many years as possible, *White* 2594——All main drains should admit a man to go up and clean them, *Hodgson* 2980.

2. *Necessity for a General Act:*

A general Act for the sewerage of densely peopled communities absolutely necessary, *Rep. p.* xvii. *Smith* 92–97, *Byles* 253, *Williamson* 1705, *White* 2572–2576, *Smith* 2672. 2676. 2695. *Cubitt* 3417. 3456——There are many streets in which sewers are situated, and the inhabitants neglect to take advantage of them, *Peeke* 2041, *Newman* 2093.

3. *Present and proposed Powers of Commissioners:*

Improvements suggested; every house should be obliged to have communication with the sewers, *Smith* 92–97——The commissioners of sewers cannot make persons communicate with the sewers; on the contrary, there is a penalty for communicating with them, *Byles* 193–196——There should be some power to compel people to communicate with sewers, *Dr. Arnott* 547, 548——Power to enforce simultaneous cleansing of sewers would be most important, *Baker* 1580——Commissioners have very much felt the want of this power, proceedings being greatly embarrassed in consequence of not having such power, *Baker* 1581——Commissioners no power of preventing the making receptacles for filth below the level of the sewer, *Peeke* 2024, *Newman* 2089——Nor any power to compel communications from houses to sewers, *Peeke* 2024*, *Newman* 2086——Mode of rating to sewers' rate, *Peeke* 2045–2073——No house should be allowed to be inhabited till sewerage was complete, *White* 2581——The Building Act does nothing as respects open spaces or sewerage, *Smith* 2638——Proposed alterations in the Board composing the Commissioners of Sewers, *Cubitt* 3453——Defects in the working of the Commissioners of Sewers in London; none of the main sewers should be carried into the Thames, *Cubitt* 3447.

Report, 1840—*continued.*

SEWERS—continued.

4. *Communication with Sewers:*

No power of enforcing communication with sewers, *Byles* 193, *Unwin* 1406, *Drew* 1486, *Williamson* 1725, *White* 2582, *Smith* 2680, *Newman* 2096, *Pennethorne* 2858——Advantage to health of under-ground drainage, *Newman* 2113.

5. *Regulations for application to Communicate with Sewers:*

Communication:

Mode of consenting of commissioners; application of landlords; amount of contribution of landlords to rate, *Drew* 1480——Mode of application to Commissioners of Sewers; in some cases proprietors pay the expense; where the public would derive a benefit the commissioners have borne a portion, *Peeke*, 2023——Persons who erect houses cannot use drains without leave of commissioners, *Peeke* 2033. 2035——Owners have nothing to pay for the privilege of communicating with the main sewer, *Peeke* 2039.

6. *Increase of:*

Commissioners endeavouring to lay down sewers in all great thoroughfares, *Peeke* 2032——Commissioners should make great lines of sewers through every district on which buildings stand, or are about to be erected, *Pennethorne* 2890.

7. *Uncovered Sewers:*

Fever is most prevalent in the neighbourhood of uncovered sewers and other places in which filth is collected; intolerable exhalations arising from them; such places described, *Smith* 22-24——Archways over sewers very beneficial to the health of the neighbourhood, *Drew* 1492.

8. *In Particular Places:*

Aldersgate-street.—An improvement in the sewerage would improve the health of the poor, and save an expense to the parish, *Jordan* 160, 161.

Birmingham.—Open drains in the Bordesley district, *Wood* 2281–2284——Proceedings of Commissioners of Sewers when new streets are erected in Birmingham, *Hodgson* 2985.

Bolton.—There are sewerage Acts, but they are very inefficient, *Ashworth* 1842.

Drury-lane.—Defective state of the sewerage in Drury-lane, and injury done to the health of the inhabitants in consequence, *Walker* 3133.

Dublin.—The Commissioners of Paving in Dublin have no funds wherewith to make sewers, and have not the power to enter houses to see that private sewers are properly constructed, *Maunsell* 2237——Imperfect state of the sewerage in Dublin, the majority of the courts and alleys are destitute of drains, *Maunsell* 3194——Landlords are required to provide sewers communicating with the main sewers, under the penalty of 20 *l.*, *Maunsell* 3238.

Edinburgh.—Immediately in the vicinity of the town there are open common sewers; water from these sewers is used for irrigation, *Simpson* 1981.

Giles, St.—No underground drainage of any kind to St. Giles and Spitalfields, *Pennethorne* 2809.

Hull.—In many parts of the suburbs there are several open sewers, *Wood* 2344.

Leeds.—State of sewerage in the large streets, *Williamson* 1759-1761——No provisions for drainage, sewerage, cleansing, ventilating, or building, *Williamson* 1749.

Limehouse District.—There was a sewer in one of the streets in which the cholera broke out, but the drains did not run into it; there was not a house that did not lose an inhabitant, *Heelis* 287-289.

Liverpool.—No courts have underground sewers, *Duncan* 2395——In the main streets, the greater number of those inhabited by the working classes there are no sewers, *Duncan* 2395——No authority in Liverpool has power of inspection as regards sewerage and drainage; amount lately laid out in sewers' sums exhausted, *Duncan* 2418——Local act has no power to force householders to communicate their drains with the sewers, *Duncan* 2422——Neglect of sewerage and drainage in Liverpool, *Duncan* 2518–2521.

Manchester.—Cleansing and sewerage as bad at Manchester as possible, *Wood* 2216.

Poplar District.—Amount of rate levied in this district, *Baker* 1554——No power in commissioners to force householders to communicate with sewers, *Baker* 1561.

Southwark.—The open drains and cesspools are very prejudicial to the health, *Evans* 630-635.

Report, 1840—*continued.*

Sewers—continued.

8. *In particular Places*—continued.

Surrey District.—Amount of sewers' rate levied in the district, about 1 *d.* in the pound, *Drew* 1494.

Tower Hamlets.—The sewers are not regularly inspected, but only casually, by the inspector of pavements, *Byles* 200, 201——Every facility given to householders to communicate with sewers, *Unwin* 1359——Many cases in which inhabitants do not avail themselves of the power of communicating with sewers, *Unwin* 1407——Amount of sewers' rate in Spitalfields is 9*d.* in the pound on the rack-rent, *Unwin* 1415——Evidence as to collection of rates; mode of levying them, *Unwin* 1423–1449.

See also *Alleys. Cesspools. Cholera. Courts. Disease. Drains. Fever. Fines. Gullyholes. Gutters. Lambeth. Landlords. Liffey. London. Mortality. Open Gutters. Rotherhithe. Slaughter-houses. Sluices. Stagnant Water. Stayley-bridge. Stepney. Suburbs of London. Surrey and Kent Districts. Tower Hamlets.*

Shepherd's Court, Whitechapel Union. Remarkable case in which successive lodgers were affected by fever, the rooms not having been whitewashed; cessation of the fever when they were cleansed, *Smith* 36–38.

Shepherdess Fields Bath. Rule of admission to the mechanics' bath, and number capable of being accommodated, *Sowten* 3086–3090.

Simpson, Dr. *J.* (Analysis of his Evidence.)—Resides at Edinburgh, 1956——Use of the water from the common sewers, for the purpose of irrigation, a great nuisance, 1957——Majority of medical men of opinion that it is unwholesome, 1958——Increased value of land, 1963——Carried to such an extent that in some localities persons avoid particular roads to keep out of the way, 1967——Authorities in Edinburgh have reported against the system, 1968——Great cause of complaint to the working classes; stench on King's domains, Holyrood-house, so dreadful, that the poor cannot walk there except on particular days, 1970——Filthy state of houses where many strangers lodge; case cited; fever raging occasioned by the stench from deposits, 1974——System of inspection recommended, 1977——Fever board of Edinburgh press the subject of ventilation and cleansing houses of the poor, 1978——Fever board clean out and whitewash; in many instances inhabitants refuse permission, 1969, 1970——Mortality of the troops in the barracks at Peers-hill, attributed by witness to the insalubrity occasioned by this mode of irrigation, 1980——Immediately in the vicinity of the town there are open common sewers; it is this water which is sprinkled over the land to irrigate it, 1981——Holyrood declared by the Queen's physicians to be unfit for a residence for Her Majesty, on the grounds of the insalubrity occasioned by the present mode of irrigation from the sewers, 1988.

Slaughter-houses. Striking effect of sewerage in diminishing fever exhibited among the slaughter-houses of Whitechapel and the Hackney-road, *Smith* 26–28——The slaughtering of cattle in crowded places and cellars must be injurious to health, Dr. *Arnott* 575–580——Disadvantages of slaughter-houses in crowded populations, *Jenks* 2793——Should be put down by law, *Pennethorne* 2880——Nuisance arising from slaughter-houses in Dublin, *Maunsell* 3316.——*See* also *Abbatoirs.*

Sluices, Sewers. Tide cannot rise in the drains in Tower Hamlets districts unless by accident. There are sluice-keepers appointed, whose business it is to attend to valves, *Peeke* 2074.

Small Pox. At present very prevalent at Bradford, *Ellison* 1641——The malignity of the small-pox is increased (Holborn Union), *White* 397——Often spread and much aggravated by the miserable state of the residences of the poor in large towns, *Wood* 2249.

Smith, Southwood, M. D. Opinion coincides with that of Dr. Southwood Smith as to cases of fever, *Jordan* 132–134.

Smith, George. (Analysis of his Evidence.)—An architect, residing in the Old Jewry 2626, 2627——Has considerable practice for the last 37 years in the City, 2628——District surveyor of the south of the City of London, 2630——In the neighbourhood of the metropolis the Building Act does take in many places which are now growing very populous, 2636——The Building Act does nothing as respects open spaces or sewerage, 2638——Some regulation which would insure ventilation, and buildings constructed for health, would be very desirable, 2641——Many instances of ill-health exists in London; generally every room occupied by a family, all huddled together, 2642——Dreadful state of the courts round Saffron-hill, which were investigated during the cholera, 2643——Evils of cholera much aggravated from the form of dwellings, and the confined state of courts, and want of proper sewerage, 2644——There is a court in the neighbourhood of Holborn which is horrible to go up, in a most filthy state, 2647.

Witness aware of the great extent of cellar population in Manchester; unhealthy state of the inhabitants, 2650–2653——Many instances of courts in London with the worst

Report, 1840—*continued.*

Smith, George. (Analysis of his Evidence)—*continued.*

worst ventilation, 2654——Any new Building Act should forbid the construction of courts of certain description, and the building houses back to back, 2656——Every court should be of a width comparative with the height of the houses on either side, 2658, 2659–2633——At present there are seven rates or classes of buildings, 2664——Regulations as to privies, dust-holes, 2670, 2671——A good system of sewerage should also be ensured, 2672, 2673——A general sewers Act, laying down general regulations, and give facilities to populous districts, would be of great use, 2676——No power in commissioners to enforce inhabitants to communicate with sewers, 2680–2681——Commissioners should have power to prevent the sinking of cesspools, 2690, 2691——Evidence concerning the London Building Act, 2692——A general sewerage Act, giving additional power, in large towns, would be highly advantageous, 2695——Good regulations as to health, &c. of towns would no doubt tend to lower rates, 2703——Commissioners of sewers have sometimes made objections to make sewers on application, 2711——On the grounds of want of funds and want of power, 2712——Commissioners have no power in Westminster, 2713——Buildings erected in the Commercial-road district by the Mercers' Company, 2722——Rent of houses and lodgings; rate of wages; 2723–2729—— Very few of the houses inhabited by the poor have any sewers, 2730——A local inspector, appointed by the inhabitants, should have power to see the districts properly cleansed, 2739——Highly desirable that some regulation, such as a board of health, should take place, to preserve the health of inhabitants in close districts, 2742.

Smith, Thomas Southwood, M.D. (Analysis of his Evidence.)—Physician to the London Fever Hospital, 2——Has examined the state of the dwellings of the poorer classes of Bethnal-green and Whitechapel, and has made a report to the Poor Law Commissioners, 3–5——General causes of fever, 6——Greater prevalence of fever where drainage is bad; districts could be marked out as defective in sewers, by the number of cases of fever, 7–9——Districts enumerated in which this defect is observable, 10——They are the most densely populated, and by the poorest classes, 11–13——Peculiar prevalence and malignity of fever in Bethnal-green and Whitechapel, 14–16——Number of pauper fever patients in those unions in 1838; probable number of others, 17–21——Fever is most prevalent in the neighbourhood of uncovered sewers and other places in which filth is collected; intolerable exhalations arising from them; such places described, 22–24.

Dampness of Bethnal-green; practice of silk weavers to close their windows, 25——Striking effect of sewerage in diminishing fever exhibited amongst the slaughter-houses at Whitechapel and in the Hackney-road, 26-28——By proper drainage, cleansing and ventilation, much of the evil might be removed, 29——Expense of fever cases to Bethnal-green and Whitechapel unions, 30——To incur expenses in making drains would be economy as well as humanity, as the outlay would not be annual, 31–33.

Free currents of air might be produced by cutting openings which might be done at a moderate expense, 34——Power should be lodged somewhere to prevent landlords from building in swampy places, and to compel them to keep their houses in a state of wholesome cleanliness, 35——Remarkable case in Shepherd's-court, in which successive lodgers were affected by fever, the rooms not having been whitewashed, cessation of the fever when they were cleansed, 36–38——Bethnal-green is not generally crowded; there is no reason why it should not be healthy, except that the necessary precautions are not taken, 40——Disgusting condition of Punderson's gardens described; prevalence and fatal character of fever, 41——Extraordinary malignity of the fever in Campden gardens, where the houses, if properly built and drained, are healthily situated, 42, 43.

Lamb's fields described; quantity of stagnant water and putrid animal and vegetable matter; whole families are swept away by fever, 44, 45——Hare-street fields; frequent inundations; malignant character of the fever which is constantly breaking out, 47——Accumulation of filth in Alfred and Becwith-rows; wretched construction of the houses; prevalence of fever, 48——Collection of filth and dreadful stench in North-street, which is occupied by pig-dealers, 49——Prevalence of malignant fever in St. John-street; crowded state of the houses, 50——State of Fleet-street and Shackwell-street, 51——Accumulation of putrifying matter in Gibraltar-walk, Hackney-road division; prevalence of fever, 52——Closeness and filth of the courts and lanes, from Virginia-row to Shoreditch; constant recurrence of infectious diseases, 53.

In Read-street and Vincent-street, families live in the cellars and kitchens of undrained houses; fever is never absent, 54——Church-street, Bethnal-green, the main thoroughfare, has no drain, 55, 56——Effluvia rising from an open ditch in Wellington-row, close to the gardens which the poor people cultivate, 57——Striking improvement in the health of a district between Goldsmith's-place and Cambridge-heath, since a common sewer was made, 58, 59——Open ditch behind Bethnal-green, 60.

The greater part of Whitechapel is badly drained, densely populated, and in many parts there is no current of air, 61–64——Baker's-arms-alley described; filth, and want of light and air, 65, 66——Filthy and unwholesome state of Johnson's-change, Cartwright-street, Blue-anchor-yard, and other places; prevalence of fever, 67–71.

Report, 1840—*continued.*

Smith, Thomas Southwood, M.D. (Analysis of his Evidence)—*continued.*

Improvement that might be effected in the health of the neighbourhood, by proper sanitary regulations, 72——Efforts are making to impose the sewerage, 73–76——Low class of landlords, 78——Inadequacy of regulations for building and draining, 79–83——Necessity of legislative interference; the poor cannot protect themselves, 84, 89——Spread of diseases to healthier places, 90, 91——Improvements suggested; every house should be obliged to have a connection with the sewers, 92–97——The parishes could not make the sewers at their own expense; they should be assisted by the public, who are now endangered by the spread of disease, 98–105. 114–116——Evils arising from the streets being unpaved, 106, 107——There are no regulations for scavenging, 108——Other diseases, as well as fever, prevail; severity of small-pox, measles and cholera, 109–113——Other parts of London, under similar circumstances, 117, 118——Dampness and fog are powerful causes of malaria, 119–122——Importance of facilitating the acquisition of coal, 123, 124——New houses are not built better than the old ones, 125, 126——Good supply of water in Whitechapel, 127——The open spaces in Bethnal-green being neglected, and filled with stagnant pools, instead of being healthy are injurious, 128–130.

Smithfield. Densely-peopled district surrounding Smithfield; the lower class of Irish live there, *Miller* 792, 793.

Southwark. The air is vitiated by manufactories, *Moseley* 904.

Sowten, William. (Analysis of his Evidence.)—Proprietor of baths in the Westminster-road, 3056——Dimensions of the baths; charges for admission; temperature; number of visitants, &c., 3060–3081——Description of the baths in Holborn and in Shepherdess-fields, 3083–3092——Facilities for the establishment of baths in Manchester, Birmingham, and Leeds, 3093——Mode in which the Westminster baths are heated, 3095–3100——In one day, at the Westminster baths, there were 2,500 in the mechanics' bath, and 1,000 in the other two baths, 3102——Attendance of Messrs. Maudslay's and Messrs. Clowes' workmen at the mechanics' bath, 3105, 3106——It is the intention to establish a mechanics' bath in Holborn, 3110——Raising the rate of admission to the mechanics' bath would tend to shut out the noisy and disorderly, 3113.

Spencer court, Liverpool. Dreadful state of this court, in North-street, *Duncan* 2573.

Spitalfields Parish. Worst places in this parish enumerated, *Byles* 179——Miserable courts of which this district is composed, *Pennethorne* 2797.

Spirits. The evils of spirit-drinking have increased of late, *Dr. Arnott* 591–594——The habits of the poor have been more sober the last two years; beneficial effect of closing public-houses on Sunday mornings, *Miller* 814, 815——Spirit-drinking prevails at Leeds to a great extent, *Williamson* 1787——Drinking spirits prevails very much among the poor class at Liverpool, among the females particularly, *Duncan* 2466——Promotion of disease by drinking ardent spirits, *Walker* 3157–3160.

Stagnant Water. Effects of the use of bad water from pits, in which dead dogs, &c. have been thrown; this water nevertheless often used by the poor for culinary purposes, *Wood* 2205——Drains and stagnant waters left open in the populous districts immediately round Manchester and Liverpool, *Wood* 2251.

Staleybridge. Evidence as to houses, population, buildings, drainage, &c., *Ashton* 2597——State of the working classes, *Cobden* 1811——Fewer cellar residents; bad sewerage and ventilation, *Wood* 2241.

Steam-Engines. Inutility of the Act for compelling the owners of steam-engines to consume their own smoke, *Cubitt* 3431.

Steam-boats. No steam-boats should be alowed to ply that showed any steam out of the funnel, *Cubitt* 3430.

Stepney. Miserable neglected condition of the abodes of multitudes of the working classes, *Rep. p.* v——Disgusting state of parts thereof; prevalence of fever, *Dr. Arnott* 517–520.

Stodhart, J. R. (Analysis of his Evidence.)—Treasurer of the city of Edinburgh, 1991——Nuisance near Edinburgh of the using the water from the common sewers for the purpose of irrigation, 1992——Practice prejudicial to health, 1993——Practice prevails in the royal domains of Holyrood, 1995——No power in the Police Bill to abate the nuisance, 2000——A great majority of the inhabitants consider it a great nuisance, 2003——A very general opinion that the salubrity of the air is affected by the exhalation, 2006.

Suburbs of London. Small attention paid to drainage in the new buildings in the suburbs of London, *Dr. Arnott* 535–538.

Surrey and Kent District of Sewers. Evidence concerning, *Drew* 1470–1543.

Report, 1840—*continued.*

Symons, John. (Analysis of his Evidence.)—Assistant hand-loom weaver commissioner, &c. 1061–1063——The state of the poorer classes in Glasgow is exceedingly bad, 1068——The drainage is neglected, and filth lies in the courts and alleys, 1069–1071——Extraordinary filth and misery of the wynds, 1072–1075——Fever is much generated, 1076, 1077——Wretched and indecent state of lodging-houses, 1078——Horrible state of society, 1079–1083——Extraordinary number of spirit-shops, 1084–1087——Mortality, 1089——Penury, disease, and crime are unparalleled, 1090–1094——Occupation of children; want of instruction, 1100–1107——Increase of mortality as stated by Dr. Cowan, 1110–1116. 1134, 1135——Typhus fever is generally existing, 1117–1119——Supply of water, 1120–1122.

No improvements in drainage have been made while the population was rapidly increasing, 1123–1130——The powers of the town-council are great as regards sewers, 1131–1133——Great increase of fever, 1137–1139——Necessity of opening some of the districts, 1140–1142——There are no privies at all in some of the courts, 1147–1151——Glasgow is in a worse condition than any town on the Continent, 1152–1158——Objection of the people to ventilation, 1159–1167——Escape of Lyons from the cholera; attributed to the lime-kilns, 1168–1170——The children at Glasgow are very emaciated, 1173, 1174——Care taken of the children in the mills of Mr. Ashforth, 1175–1177——There is a large open space at Glasgow for exercise, 1178–1181——The situation of Glasgow is naturally good, 1182–1185——Scanty diet of the people; potatoes and a small quantity of meat, 1186–1188.

T.

Temperance Societies. Many profligate persons have been reclaimed by temperance societies, but they have not yet effected any general amelioration, *Williamson* 1786.

Thomas-court, Dublin. Description of the habitations of the poor, and prevalence of disease therein, *Maunsell* 3222–3235.

Title to Lands. Heavy expense attendant on making out a title to a small purchase. *Cubitt* 3445.

Tower Hamlets. In many parts of, there are above-ground water-courses, which being obstructed by houses form into stagnant pools, *Byles* 197——There are houses with 10 or 12 rooms, and a family living in each room, *Byles* 198——The district is well supplied with water by the East London Company, *Byles* 199——Seven levels of sewers in the district, *Unwin* 1344.

Toxteth Park. A great many courts now building in Toxteth-park, *Duncan* 2436.

Trade Clubs. Very few trade clubs in Birmingham, *Fletcher* 1341.

Troops, Edinburgh. Mortality of the troops at the barracks at Piershill attributed by witness to the insalubrity occasioned by their mode of irrigation, *Simpson* 1980.

Tyndal's Buildings, Holborn Union. Are in a filthy and unwholesome condition; prevalence of fever there, *White* 362. 366–368.

Typhus Fever:

Bradford.—Now raging; opinion of medical men that it is mainly owing to the defective state of the drainage and sewerage, *Ellison* 1593 1597.

Holborn Union.—Is generated in this locality, there being predisposing causes, *White* 383–385.

U.

Union-court, Banastre-street, Liverpool. Bad state of this court; fevers generated in consequence of want of drainage, *Duncan* 2511, 2512.

Unwin, J. (Analysis of his Evidence.)—Clerk of commissioners of sewers for Tower Hamlets, 1342——Seven levels in that district, 1344——Names of the levels, 1348——Every facility given to householders to communicate with sewers, 1359——Lines in which there is no sewer, 1365–1369. 1386——No power of enforcing communications with sewers, 1406——Many cases in which inhabitants do not avail themselves of the power of communicating with sewers; Rosemary-lane, 1407——Commissioners have no power to prevent receptacles for filth being sunk below the level of the sewer, 1413——Amount of the sewers rate in Spitalfields is ninepence in the pound on the rack-rent, 1415——Evidence as to collection of rates; mode of levying, 1423. 1449——No local Act for the Tower Hamlets, 1454——Inspection of sewers under commissioners, 1462–1469.

Report, 1840—*continued.*

V.

Vaccination. Small-pox is prevented in a great degree by it; but when it does occur, it is of the confluent kind, *Byles* 216, 217——Small-pox has prevailed very much; labouring classes no objection to the use of vaccination, *Clarke* 484–487——Vaccination modifies the disease so much that it hardly requires medical treatment, *Clarke* 489.

Vauxhall Gardens. Many houses have been built near the gardens on marshy land without any drainage, *Wagstaffe* 760–767.

VENTILATION:

1. *Generally.*
2. *In particular Places.*

1. *Generally:*

Importance of ventilation by wide streets and well-constructed houses, *Dr. Arnott* 511——Regulations in towns to enforce cleansing and ventilation are highly desirable to the health of the inhabitants, *Wood* 2236——Want of these regulations aggravates very much the discontent of the lower classes, from a feeling that there is no sympathy for their comforts, *Wood* 2238——Some regulation which would insure ventilation would be very desirable, *Smith* 2641——In any new building Act great attention should be paid to ventilation, *Pennethorne* 2849——Proposed regulations for ensuring proper ventilation of houses and width of street, *Cubitt* 3410.

2. *In particular Places:*

Birmingham.—Too many houses built back to back, without a thorough air, *Wood* 2270, 2271——Want of ventilation in houses from the practice of constructing them back to back, *Hodgson* 2972.

Bradford.—No regulation whatever as to buildings for ventilation, or for preventing houses being built back to back, *Ellison* 1601.

Dublin.—Great want of ventilation from the practice of building houses in alleys and courts back to back, *Maunsell* 3185.

Edinburgh.—Fever board of Edinburgh press the subject of ventilation and cleansing houses on the attention of the poor, *Simpson* 1978.

Glasgow.—Objections of the people to ventilation, *Symons* 1159–1167.

Hull.—System has commenced of building houses back to back, *Wood* 3340.

Liverpool.—Many houses in Liverpool, built back to back, without ventilation; this construction very injurious to the health of inhabitants, *Wood* 2160–2162——Evils of courts as to ventilation, *Wood* 2382.

Vincent-street, Bethnal-green. Families live in the cellars and kitchens of undrained houses; fever is never absent, *Smith* 54.

Virginia-row to Shoreditch. Closeness and filth of the courts and lanes in the district lying between those places; constant recurrence of infectious diseases, *Smith* 53——There is no sewer about Virginia-row, none nearer to it than Princes-street, *Peeke* 2012——Wretched state of the inhabitants, *Peeke* 2013.

W.

Wages, St. Olave's Union. The wages of the working classes at the wharfs are not sufficient to maintain their families, *Clarke* 458–461.

Wages, Spitalfields. General wages of the district described, *Byles* 230.

Wagstaffe, Matthew French. (Analysis of his Evidence.)—A surgeon in Lambeth, 681–684——Necessity of forming a sewer in East-street, as suggested by witness to the board of guardians, 685–687——The want of drainage predisposes the inhabitants to fever; expense thus thrown upon the parish, 688–692——Houses infected with fever ought to be shut up for a time and lime-washed; there is no power to compel landlords to do it, 697–700——In some places the privies are in the cellars, 700——More attention has lately been shown to the cleansing of courts, but not sufficient, 701–713——There is not at present sufficient authority or interest in the matter, 714–728——The people living close to the river are subject to intermittent fevers; all kinds of filth is thrown upon the mud, 729–736.

Their diet is fish and spirits, and is injurious, 737–739——Want of fuel and sufficient food weakens them, and predisposes them to disease, 740–743——They dress their fish

Report, 1840—*continued.*

Wagstaffe, Matthew French. (Analysis of his Evidence)—*continued.*

at home, or buy it at the numerous cook-shops, 744–748——Gin-shops abound, 749, 750——Kennington-common might be improved as an exercising ground, 753–759——Near Vauxhall-gardens many houses have been built on marshy land without any drainage, 760–767——Neglected state of the populous neighbourhood of Walworth-common; deficiency of drainage, 770–779——Some such authority as that of district surveyor, but more extensive, is needed, 780–785——The Vauxhall and South Lambeth Companies supply the district plentifully with water, 787.

Walker, George Alfred. (Analysis of his Evidence.)—Medical man, residing in Drury-lane, 3116——Description of the filthy state of Nag's Head Court, 3118———Injury done to the health of the inhabitants from the want of draining and cleansing, 3123——Prevalence of fevers in the confined courts of Drury-lane, 3124——Filthy state of Clement's-lane, Strand, 3125——Great want of scavengering and cleansing in that neighbourhood; there is no authority to enforce it, 3130——Hardship imposed upon the hard-working surgeon from the neglect of sanatory regulations; witness gives away from 100 *l.* to 200 *l.* every year to sick persons, 3132——Defective state of the sewerage in Drury-lane, and how the health of the inhabitants suffers therefrom, 3133.

Injury done to the health of inhabitants from the existence of burial-places in densely populated districts, 3134–3138——Situation of burial-grounds in London that are particularly obnoxious to the inhabitants, 3139–3144——Life may be destroyed from the exhalations of a burial-ground without any smell being perceptible, 3149——Unwholesome state of the station-house in Pickett-place, Strand, from the deterioration of the water, 3150——Deterioration of water from the proximity of privies to water-butts, 3153——Great mortality in Clement's-lane, Strand, 3153, 3154——It equals that of the worst districts in London, 3155——Great want of a good medical police, 3156——Promotion of disease by drinking ardent spirits; the bad air inhaled induces the poorer classes to fly to spirits, 3157–3160——Predominance of schools without play-grounds about Drury-lane, 3161——Play-grounds are extremely necessary to the health of children, 3165.

[Second Examination.]—Great want of ventilation in close courts and alleys in London, 3464——Horrid state of Wellington-court, Drury-lane; dreadful cases of disease therein, 3464——General want of drainage in the courts and alleys in the vicinity of Drury-lane, 3468——Cases of disease arising from want of drainage, 3469–3471——Manner in which want of sewerage promotes dram-drinking, as instanced with gravediggers, 3478, 3479——Nuisance arising from night-carts; promotion of disease by means of them, 3483, 3484——Evils arising from the existence of burial-places in the metropolis, 3488——Cases in which persons have been fatally affected by the effluvia arising from churchyards, 3489——Evils arising from the practice of leaving graves open in burial-grounds, 3493.

Case in which the same poison, arising from putrefaction, has had a different effect on two individuals, 3495——Impossible burying in a large town to prevent the gases mixing with the air, 3497——Intolerable nuisance arising from the stench of the dead bodies in St. Clement's church in the Strand, 3501——Length of time gas will remain in a coffin before it is entirely evaporated; case in Hampstead churchyard of a gravedigger being struck down with it, 3565——The practice of keeping bodies in low neighbourhoods before interment is extremely injurious to the health, 3506——The bodies are sometimes kept 12 and 14 days, and there is no power to order their interment, 3509.

Bitter animosity begotten against parochial authorities from their indecent mode of interring the poor, 3512——Disgusting occupation of a gravedigger, 3514——Perquisite accruing to gravediggers from the wood of the coffins, 3517——Danger attendant on depositing the wood of coffins in houses for fire-wood, 3519——Unwholesome state of Enon chapel, Clement's-lane, 3520.

Walton-court, Whitechapel. Description of the state thereof; prevalence of fever, *Smith* 68.

Walworth Common. Neglected state of that populous neighbourhood; deficiency of drainage, *Wagstaffe* 770–779.

Wapping. Filthy and densely-peopled district, *Moseley* 992–997——Disgusting state of parts thereof; prevalence of fever, *Dr. Arnott* 517–520.

Washing and drying Clothes. There is no place near Leeds sufficiently large for washing or drying clothes available to the working classes, *Williamson* 1693.

Report, 1840—*continued.*

WATER:

1. *Generally.*
2. *In particular Places.*

1. *Generally:*

Importance of an ample supply of water; appears to be lamentably deficient in several populous and increasing communities, *Rep. p.* xx——Importance of a plentiful supply, *Dr. Arnott* 509——A supply of good water, in any new regulations, should be especially regarded, *Pennethorne* 2873.

2. *In particular Places:*

Ashton, Staleybridge, and Dukinfield.—Very well supplied under recent Acts of Parliament, *Ashton* 2621.

Birmingham.—Supply of water in Birmingham generally very good, *Wood* 2289——Goodness of the supply of water in Birmingham, *Hodgson* 3013.

Bolton.—Supply of water is ample, good, and cheap, *Ashworth* 1858.

Bradford.—The town is not well supplied with water, *Ellison* 1638.

Dublin.—Insufficiency of the supply of water in Dublin, *Maunsell* 3281. 3328——Proposed remedies, *Maunsell* 3328.

Lambeth.—Is plentifully supplied by the Vauxhall and South Lambeth Companies, *Wagstaffe* 787.

Leeds.—Supply of water exceedingly deficient, *Williamson* 1736——Former supply of water inadequate; a new company have obtained an Act, and a more ample supply is expected to be brought to the town in the course of two years, *Williamson* 1762——That used by inhabitants of a very impure description, *Williamson* 1769.

Limehouse.—The supply is good, *Heelis* 304.

Liverpool.—Imperfect supply of water to the streets and courts inhabited by the poor, *Duncan* 2442.

London.—Deterioration of water from the proximity of privies to water-butts, *Walker* 3153.

Saffron-hill, Holborn Union.—There is no scarcity of water; it is supplied by the New River Company, *Wilkes* 441.

Southwark, St. George's.—The supply is plentiful; the people get it at cocks common to several houses, *Evans* 672–674——The supply of it is good in St. Olave's, *Clarke* 463.

Whitechapel.—There is a good supply of it in the Whitechapel district, *Smith* 127.

See also *Stagnant Water.*

Weavers. Food and clothing better among the working classes now than formerly, except among weavers, who furnish a large number of cases to the public institutions, and who generally present a low condition of health, *Williamson* 1932.

Weavers' Children, Spitalfields. Marked difference between the children of weavers and of other people; they are subject to scrofulous disease, *Byles* 231–235.

Weavers' Work-rooms, Spitalfields. The weavers work in very close rooms, *Byles* 236–238.

Weld, Charles Richard. (Analysis of his Evidence.)—The drains in St. John's and St. Margaret's, Westminster, are in good order, 1193–1195——The courts and alleys are dirty, and injurious to health, 1196–1198——The ventilation is very bad, 1199–1202——High rents paid for bad accommodation, 1205–1209——A whole family generally lives and sleeps in one room, 1210–1216——Uncleanly habits of the poor in the courts, 1217–1219——High rents of Westminster compared with Manchester, 1219——The scavengers do not penetrate into the courts, 1220–1226——The landlords compound for the rates, 1228–1230.

Wellington-court, Drury-lane. Wretched state of this court as regards ventilation and cleansing, *Walker* 3464.

Wellington-row, Bethnal-green. Effluvia rising from an open ditch close to the gardens which the poor people cultivate, *Smith* 57.

Wentworth-street, Whitechapel. No sewerage in this street, *Peeke* 2014.

Report, 1840—*continued.*

West-street. The inhabitants are the lowest description of persons; they are chiefly day-labourers, and many of them are Irish, *Jordan* 162, 163——Four women and two men were sleeping in a very small room every night, *Jordan* 164, 165.

West London Union. Places included in this union; population of the union, *Jordan* 135–137.

Westminster. Boundaries of the district in which the poor reside; neglect of sewerage, open drains, &c. *Moseley* 834–850.

St. John's and *St. Margaret's.*—The courts and alleys are dirty and injurious to health, and the ventilation very bad, *Weld* 1196–1202——Commissioners of sewers have no power to make new sewers in Westminster, *Smith* 2713.

White, Edward. (Analysis of his Evidence.)—One of the medical officers of the Holborn Union, 349–352——Parishes of which the union is composed, 353——Baldwin's-gardens, a long street between Gray's-inn-lane and Leather-lane, has no sewer, and many of the houses are in a filthy state, 357–361——Filthy and unwholesome condition of Tyndal's Buildings, opposite the entrance of Gray's-inn; prevalence of fever there, 362. 366–368——Portpool-lane; improvement effected by Messrs. Reid, 369–374——There is no system of inspection to lead to cleanliness, 375–377——It would be a great advantage if power were given to cleanse and whitewash after fever, 378–382——Typhus fever is generated in the locality, there being predisposing causes, 383–385.

Public walks would promote their health, 386–390——The whole district is occupied by Irish labourers, who pay no attention to their lodgings; their health is evidently less good than that of persons living in better streets, 391–394——The children, unless very strong, die early; there is much typhus fever amongst them, 395, 396——The malignity of the small-pox is increased, 397——The health of the children in the workhouse is very good; better than when they were at Norwood, 398–401.

There has not been much increase of building, 402——The number of cases of fever has fallen off of late, 403–407——The health of the poor would be improved by better drainage, cleanliness, and ventilation, 408——The want of cleanliness has an effect upon the moral character of the children; they run about half naked, 409, 410.

White, John. (Analysis of his Evidence.)—District surveyor of Mary-le-bone, 2541——Principal provisions of the London Building Act; one for the purpose of ensuring thickness of party-walls, to prevent accident from fire, 2545——Evidence as to manner of planning courts in London; general construction very injurious to health, 2549——Want of regulations; some general law on the subject of buildings necessary, 2553–2558——Nothing impracticable in a general Building Act, the regulations of which might be carried out by local authorities, 2559——A good system of drainage, for the improvement of the large towns in England, would be, if no attached houses were to be built without sewers being put down in the first instance, 2568——Great necessity for a general Sewerage Act; no town worse drained for suillage drainage than Oxford, 2572–2576——Cesspool drainage should be prohibited altogether, 2578——Houses should not be allowed to be inhabited till sewerage was complete, 2581——No power in commissioners to oblige owners to communicate with under-ground drains, 2582.

The Act should include powers to enforce paving the surface of courts and streets, 2588; and for performing all scavengers' work, 2589; and for putting gullies into the sewers, 2589——Objections to the Bill for metropolis sewerage; to several clauses, 2591——When any general Act is passed, there should be a competent person to see that it is carried into effect, 2592——A board of health might be appointed in different counties or districts, to report on the sanatory state of the various places, 2593, 2594——Difficulty of making sewers is the want of money; the expense ought to be spread over as many years as possible, 2594——The Bayswater sewer was executed by Government, by an issue of Exchequer Bills, to be paid off in 20 years, 2594——Some mode of this kind might be used to drain all towns, charging the capital on the rent of the houses, 2594.

White's Rents, Limehouse. Extraordinary improvement in the health of the inhabitants of, since the covering of an open sewer, *Heelis* 298, 299.

Whitechapel. Miserably neglected condition of the abodes of the working classes, *Rep. p.* v——The greater part of it is very badly drained, densely populated, and in many parts there is no current of air, *Smith* 61–64——Improvement that might be effected in the health of these neighbourhoods by proper sanatory regulations; efforts are making to improve the sewers, *Smith* 72, 73–77——Streets, courts, passages, and alleys, are without any drainage, and are extremely filthy and close; prevalence of fever, *Smith* 70, 71——Names of streets and courts in Whitechapel in which there is no sewerage, *Peeke* 2014——This district the filthiest imaginable, *Peeke* 2014; and very densely populated, *Peeke* 2015——Plan of courts between Whitechapel and Wentworth-street, *Pennethorne* 2883.

Whitechapel Union. Number of pauper fever cases which occurred in this union in 1838, *Smith* 17–21——Expense of fever cases to this union, *Smith* 30——Worst places in this union enumerated; they have been the constant abode of fever, *Byles* 178.

Report, 1840—*continued*.

Wilkes, John Wood. (Analysis of his Evidence.)—Relieving officer of the Holborn Union, 411——Saffron-hill is very unhealthy; with the exception of Fleet-ditch, there is no drainage near it, 414——General want of drainage throughout the district, 415——There are numerous courts and alleys, some of which have no current of air, 416–418——The district is unhealthy, and there have been many fever cases, 419–423——Great expense is thrown upon the parish by them; a guinea is paid for each patient, 424, 425——The Irish frequently live five or six families together in one room, with a donkey, pigs, or stale fish, 426——Beneficial clause in the Metropolitan Police Courts Act, enabling the guardians to summon the owners of houses before magistrates to cleanse their property, 430——The English labourers are much more cleanly in their habits than the Irish, and not so willing to put up with anything; they are more free from fever, 436–438——At the time of the cholera there was a general cleansing of the parish by the Paving Board, 439——There is no want of fuel; much charitable relief is given; witness has generally found good fires, 440——There is no scarcity of water; it is supplied by the New River Company, 441.

Williamson, Dr. (Analysis of his Evidence.)—Physician, Leeds, 1667——Bad state of many parts of the north ward, 1676, 1677——Cases of malignant fever are continually sent to the fever hospital from Boot-and-Shoe-yard 1678——Arising from neglect as to cleansing, draining and ventilating, 1679——State of the north-east ward, 1683——Of the east ward, 1688——Of the north-west ward, 1690——There is no place for washing or drying clothes, sufficiently near the town to be generally available to the working classes, 1693——Improvement of cellar steps and openings necessary, 1693——Extreme deficiency of sewerage and drainage generally admitted, 1695, 1696—— State of the sewer in Regent-street in 1839, 1697——State of houses in York-road, from neglect of sewerage, 1703——A legislative enactment necessary to meet the present evils, 1705–1707——Circumstances of many other towns similar to Leeds, and a remedy imperiously required, 1709——Houses of the lower classes continually built back to back; regulations as to ventilation absolutely necessary, 1710, 1711——Numerous alleys and yards in which free circulation of air is prevented from their construction, 1713——No adequate provisions at present exist to enforce sanatory regulations, 1715.

A great expense is cast upon richer classes, owing to illness and fevers generated by general neglect of the precautions mentioned, 1720——Sanatory regulations very opprobriously neglected, 1723——Increased powers of drainage and sewerage a great boon, 1724——No power to force householders to communicate with sewers, 1725——Any benefits arising from education would be very much neutralized by continued neglect of the cleanliness and decency of the habitations of the poor in large cities, 1730–1734 There are several large public schools for the working classes in Leeds; day schools and Sunday schools, 1735——With the exception of the infant school, none have playgrounds, 1736——Woodhouse-moor is used by the working classes for the purposes of recreation, &c.; partially drained, but not laid out, 1738, 1739——An annual fair, 1743——Supply of water exceedingly deficient, 1746——No provision for drainage, sewerage, cleansing, ventilating or building, 1749——Effect of bad atmosphere on human health, 1750–1756——State of the sewerage in the larger streets, 1757–1761——Former supply of water inadequate; a new company have obtained an Act, and a more ample supply is expected to be brought to the town in the course of two years, 1762——No system of filtration followed, 1768——Water used by inhabitants of a very impure description, 1769.

Under provisions of new Act arrangements exist for the gratuitous supply of the poor with pure water, 1770——Two public baths in Leeds, one for better classes, and one to a certain extent used by the working classes, 1774——Number of Irish resident in Leeds, 1779——Many profligate persons have been reclaimed by temperance societies; but temperance societies have not yet effected any general amelioration, 1786——Spirit-drinking prevails, 1757——Great number of lodging-houses; their condition dirty, crowded, neglected, and ill-ventilated, 1790–1793——There is no regular system of inspection, 1796——Many proofs of the diffusion of malignant disorders from the lodging-houses, 1797——State of Bradford, 1801——General necessity of some Legislative enactment, conferring powers for the purpose of sanatory regulations, is applicable to Bradford as well as Leeds, 1806——Huddersfield and Dewsbury, and other large towns in the West Riding of York, would benefit, very largely benefit, by some such general enactment as is proposed by the Committee, 1807.

[Second Examination.]—Paving and drainage and sewerage regulations, absolutely necessary, 1876——Proper regulations as to buildings and width of streets should be enforced, 1879—— All classes of society would benefit, 1886——Local boards of health with extensive powers would be a most important benefit, 1888——System of inspection as to sanatory regulations most decidedly useful, 1889——All medical men, in every town of a certain standing, should constitute the members of a board of health, 1895——A general Act laying down regulations, which might be enforced by municipal or other authorities, 1899——Increase of houses in Leeds, 1901——Lodging-houses should be under some species of local regulation, or should be annually licensed, 1910——Number of lodging-houses has much increased, regulations proposed, 1916–1925——Food and clothing of the working classes better than formerly, 1930——Except among weavers, who

Report, 1840—*continued.*

Williamson, Dr. (Analysis of his Evidence)—*continued.*

who furnish a large number of cases to the public institutions, and who generally present a low condition of health, 1932——Evidence as to mortality of children in large towns, 1933. 1936.

Boards of health would be most conducive to the well being of the poorer classes, 1938, 1939, 1940——A most beneficial and humane regulation to send all pauper children out of town to school in all large towns, 1941–1945——Parts in which new cottages are generally improved as to building cellars, &c., in Leeds, 1948——If possible, the poor should be prevented, or rather discouraged from living in cellars, 1950, 1951.

Wood, J. R. (Analysis of his Evidence.)—Employed by the Statistical Society of Manchester in the investigation of several populous districts in Lancashire, 2130——State of Liverpool; summary of the number of courts in the borough town, 2271——Number of inhabited cellars, 7,493, 2137, 2138——Closeness of the courts from the want of outlets, 2141——Several of the courts have 16 houses, in one with 16 houses 40 families resided, 2143——Illness very prevalent in these courts; the expense of boards for coffins in one year 441 *l.*, 2149——The district in which fevers principally prevailed, was that in which cellars abound, 2152——Rent of cellars 1*s.* 6*d.* to 3*s.* 9*d.* per week, 2155——Many houses in Liverpool built back to back without ventilation; this construction very injurious to the health of the inhabitants, 2160–2162——Principal part of the streets in which the poor live have only surface drainage, smell of cellars most offensive, 2164——Accumulation of filth in the streets, decayed vegetables, offal of fish, &c., 2165–2166——Bad health of children in these crowded districts, 2167——No regulation in Liverpool as to building, 2169——Good building regulations would be very favourable to the health of the working classes, 2170——Disgusting state of the privies, only one to a great many houses, 2171——Miserable condition of the schools round Scotland road, 2183–2185——Close and offensive atmosphere in the day schools; wretched state of dames' schools, 2185–2187–2197——Price of schools 2*d.* to 6*d.* per week, 2198——In some towns there is a regulation for sending the pauper children to school at a distance from the town, 2199——Effects of the use of bad water from pits in which dead dogs and cats have been thrown, and other offensive articles; this water nevertheless used for culinary purposes, 2205.

Cellar residences not so numerous at Manchester as at Liverpool, 2210——And of a superior description as far as light and ventilation are concerned, 2210——Cleansing and sewerage as bad in Manchester as Liverpool, 2216——Injurious effects on the inhabitants demonstrated during the cholera, 2217——Children living in those dirty filthy dwellings, with miserable inconveniences, would be lowered in their moral tone, nullifying the advantages of education, 2224, 2225——Deplorable state of dames' schools in Manchester, 2226——Witness does not recollect a single instance of a school for the working classes with a play-ground, 2231——Sanatory provisions highly necessary to the health of the lower classes, 2235——Regulations to enforce cleansing and ventilation are highly desirable to the health of the inhabitants, 2236——Want of these regulations aggravates very much the discontent of the lower classes, from a feeling that there is no sympathy for their comforts, 2238——These remarks generally apply to Staleybridge and Duckinfield, Ashton and Bury, although there are fewer cellar residents, 2241–2246 In Liverpool many instances in which old houses have been let out to various families; one, in which were five families, was blown down; loss of life in consequence, 2241.

Disease much aggravated by these miseries; witness observed remarkable cases of the spread of small-pox, measles, scarlet-fever, and hooping-cough, 2249——Drains and stagnant places left open in the populous districts immediately round Manchester and Liverpool, 2251——In Manchester, in the fronts of houses, there is constantly stagnant water at the fall of the year, 2253——Fevers and many complaints have been generated in these places by the want of sanatory provisions, 2257——Employed by Statistical Society of Birmingham, 2258——Had opportunities of seeing the state of the dwellings of the poor, 2267——State of poor very much better than at Manchester, of towns generally in Lancashire, 2268——Generally speaking, drainage is very superior, 2269——Too many of the back-to-back houses without a thorough air, 2270, 2271——Bad state of dwellings in the Bordesley district, 2274——Open sewerage in this district, 2281–2284——Dr. Corrie's account of the extent of fever in Birmingham, 2285——Supply of water in Birmingham very good, 2289——State of schools; 23,176 children who were receiving no education at Sunday or day-schools, 2295——Dames' schools better regulated than at Liverpool and Manchester, 2296——267 dames' schools, and 3,900 scholars, 2298——Schools in confined situations; small rooms, close and ill ventilated, 2300–2302——State of day-schools, 2304–2307——No play-grounds whatever attached to the schools, 2308, 2309.

The general condition of the working classes in Hull much better than in the Lancashire towns, 2322——State of courts in Hull; North Myton district, 2324–2331——State of North ward, St. Mary's ward, and Humber ward, 2332——System has commenced of building houses back to back, 2340——In many parts in the suburbs there are several open sewers, 2345——Day and dame schools much of the same description as in other towns, 2348——No play-grounds at all to the schools, 2347——State of

Report, 1840—*continued.*

Wood, J. R. (Analysis of his Evidence)—*continued.*

lodging-houses bad ; general bad character of those places, 2350——No sanatory regulations as to lodging-houses ; some inspection ought to be made, 2356–2358——No cellar residents in Hull, 2361——The number of Irish very small, 2362.

Woodhouse Moor, Leeds. Is used by working classes for purposes of recreation ; is partially drained, *Williamson* 1738.

Wool-combing. Principal employment of the poor of Bradford, *Ellison* 1633.

Wynds of Glasgow. Their extraordinary filth and misery, *Symonds* 1072–1075.

Y.

York-street, Westminster. Filthy and unwholesome state of the alleys, *Moseley* 854, 855.

Z.

Zoological Gardens. Ignorance displayed in placing animals in a house without ventilation, *Dr. Arnott* 583.

REPORT

FROM THE

SELECT COMMITTEE

ON

IMPROVEMENT

OF

THE HEALTH OF TOWNS,

TOGETHER WITH THE

MINUTES OF EVIDENCE,

APPENDIX, AND INDEX.

Effect of INTERMENT of BODIES in Towns.

Ordered, by The House of Commons, *to be Printed,*
14 *June* 1842.

Martis, 8° *die Martii*, 1842.

Ordered, THAT a Select Committee be appointed to consider the expediency of framing some Legislative Enactments (due respect being paid to the Rights of the Clergy) to remedy the evils arising from the Interment of Bodies within the Precincts of large Towns, or of Places densely Populated.

Martis, 15° *die Martii*, 1842.

A Committee was nominated of,—

Mr. Mackinnon.	Mr. Ainsworth.
Mr. D'Eynecourt.	Mr. Beckett.
Lord Ashley.	Lord Mahon.
Colonel Fox.	Mr. Cowper.
Mr. Thomas Duncombe.	Colonel Acton.
Mr. Evelyn Denison.	Mr. Kemble.
Sir William Clay.	Mr. Vernon.
Sir Robert Harry Inglis.	

Ordered, THAT the said Committee have power to send for Persons, Papers, and Records.

Ordered, THAT Five be the Quorum of the Committee.

Martis, 19° *die Aprilis*, 1842.

Ordered, THAT Mr. D'Eynecourt be discharged from further attendance, and that Mr. Redhead Yorke be added to the Committee.

THE REPORT - - - - - - - - - - - - p. iii
PROCEEDINGS OF THE COMMITTEE - - - - - - p. viii
MINUTES OF EVIDENCE - - - - - - - - - - p. 1
APPENDIX - - - - - - - - - - - - - p. 196
INDEX - - - - - - - - - - - - - - p. 215

THE REFORM CLUB LIBRARY

REPORT.

The SELECT COMMITTEE appointed to consider the Expediency of framing some Legislative Enactments (due respect being paid to the Rights of the Clergy) to remedy the Evils arising from the INTERMENT of BODIES within the Precincts of large Towns, or of Places densely peopled:——HAVE examined the Matters to them referred, and have agreed to the following REPORT:

YOUR Committee have deemed it expedient, in the Inquiries which they have made regarding the important question, how far the Health of the Population might be affected by Interment taking place within Towns or densely-peopled places, to consider the subject under the following heads:

1. Whether the custom of Interments, within the precincts of large Towns or populous places be injurious to the Health of the Community.

2. In the event of the Injury being proved, what Remedies could be suggested.

3. In what manner the Remedies ought to be applied, so as not to interfere with vested rights.

I. In reference to the first subject of inquiry, how far the present custom of Interment in populous places be injurious to the Health of the People, Your Committee have received Evidence from persons in every class of life. That of some of the sextons and grave-diggers in this Metropolis exhibits a loathsome picture of the unseemly and demoralizing practices which result from the crowded condition of the existing graveyards—practices which could scarcely have been thought possible in the present state of society. Your Committee have also obtained the Evidence of men of a superior education and acknowledged ability; of gentlemen at the head of the medical and surgical professions; of Clergymen and high Dignitaries of the Church; and, after a long and patient investigation, Your Committee cannot arrive at any other conclusion than, that the nuisance of Interments in large Towns, and the injury arising to the Health of the Community from the practice, are fully proved.

Your Committee refer to the following extracts, among many other portions of the Evidence taken in support of their conclusion, as to the evils of the practice:

The Rev. J. Russell, D. D. (2497): "It is sickening; it is horrible."—Sir James Fellowes, M. D. (2613): "It becomes a serious question, with an increased and increasing population, upon what rational grounds such an objectionable feature can be longer continued without danger to the public health."—James Copland, Esq. M. D., F. R. S., Censor of the Royal College of

Physicians (2659): "I believe that the health of large towns is influenced by four or five particular circumstances: the first, and probably the most important, is the burial of the dead in large towns. In considering the burials in large towns, we have to consider not only the exhalation of the gases and the emanations of the dead into the air, but the effect that it has on the sub-soil or the water drunk by the inhabitants."

Sir Benjamin C. Brodie (2920), when asked whether he considered the crowded state of the churchyards as one cause of fever or disease in the metropolis, answers, "I have always considered that as one cause." (2909.) "My opinion is, that the interments in the interior of this town must be injurious to the health of the town." And W. F. Chambers, Esq. M.D., in his letter to the Chairman, which will be found in the Appendix, states, "I have no doubt that the fevers which are called typhus, even in this cleanly quarter of London (Brook-street), owe their origin to the escape of putrid miasma. I should presume that over-crowded burying-grounds would supply such effluvia most abundantly."

George Alfred Walker, Esq. surgeon, of Drury-lane, who has considered the subject with great attention and ability, gives the same testimony, and the whole mass of evidence taken before the Committee leads to a similar result; it has, therefore, not been deemed requisite to give in detail further extracts on this part of the subject.

The chief part of the Evidence given before Your Committee has been in reference to the Metropolis: but the Evidence received from some intelligent persons, in regard to other large Towns, and the mass of correspondence from the mayors, or other official gentlemen, communicated from nearly every large and populous place in the United Kingdom, some portions of which correspondence are inserted in the Appendix, sufficiently prove, to the satisfaction of Your Committee, that the evils of Interment in Towns and populous places have grown to such a height that no time ought to be lost by the Legislature in applying a remedy. That this custom has desecrated the repose of the dead and injured the health and feelings of the living cannot be denied; it has also exhibited the singular instance of the most wealthy, moral, and civilized community in the world, tolerating a practice and an abuse which has been corrected for years by nearly all other civilized nations in every part of the globe.

II. The next question, how to remedy the nuisance proved to exist, would resolve itself into a recommendation that such legislative enactments should be framed as would prevent the interment of the dead, in or near the habitations of the living. Your Committee, however, cannot but foresee that some obstacles must be overcome in effecting this change; besides which an increase of expenditure must be incurred. These difficulties, which Your Committee trust will be overcome, appear to arise from the following causes:

The rapid and extraordinary extension of buildings in various parts of the kingdom, which might approximate them to places of interment when a certain distance was fixed, and might render the necessity of their removal more frequent than at first sight would appear probable.

The outlay requisite to purchase sites for the purposes of interment near large towns must in all cases be considerable, the circumjacent land bearing an increased value in proportion to the extent and population of a town.

The additional charge for removing the remains of the poor to some distance from their dwellings, and the necessity of having an officiating minister at the place of interment, and the consequent increase of expense or inconvenience to the parish or the incumbent, are not to be overlooked.

Although at the first glance these difficulties appear of moment, on consideration they lose much of their importance. The boundaries or limits of towns may be determined, and the flow of human dwellings is more likely to run in any other course than that which leads to the vicinity of a grave-yard or cemetery. Some additional expenses also must necessarily be incurred, but these will be in an insignificant proportion when compared to the great benefit that will arise to the health and enjoyment of the community by a change in the present system of interment. The Bishop of London (Evid. 2947) says, "I am sure that the Clergy, generally speaking, would be willing to make some sacrifice for the sake of effecting so great an improvement as is contemplated." His Lordship says, "With respect to interments under churches, I consider it altogether an objectionable plan."

The difficulty that was suggested in the Committee, arising from the occasional necessity of burying persons of all religious persuasions in the same inclosed ground, if a removal of interments from towns took place, seems obviated by the Bishop of London in the following questions and answers:

2967. Assuming that a piece of land for a cemetery was purchased by a parish, or by a parochial union of parishes, for the purpose of interment, and assuming that this piece of ground was purchased by a penny rate, or a rate to a certain amount raised upon the parish at large, would there be any objection to a portion of this ground being set apart for dissenters, or for people of any other religious denomination, with this money so raised?—I do not see any objection to having a part unconsecrated, if any person should prefer being buried in such ground; of course it would not be for members of our Church; the clergy would be desirous that such persons should be buried in a different part. It would be impossible, unless you set apart one for one, and another for another; you must have a part consecrated and a part unconsecrated in the cemetery for the interment of those not in the communion of the Church of England.

2968. Your Lordship sees no objection to the principle, supposing the money to be obtained by a rate levied upon the parish, to its being applied in that manner?—I should say not; I see no objection in principle. I do not suffer my objections to interfere with public measures.

Although the evidence, and especially that of a documentary kind, before Your Committee, tends to show that the grievance in question is felt even in many of the smaller towns; yet, in a question of so great importance, and involving so many feelings and interests, it appears desirable to proceed cautiously and by degrees. With this view Your Committee recommend that legislation be, in the first instance, confined to towns of the largest size, and that legislation with respect to the others, if felt needful or desirable, be postponed until a subsequent session.

III. In directing their attention to the third and last subject of their Inquiry, (the manner in which the removal of places of interment from populous towns may be effected without interfering with vested rights), particular attention ought to be paid to the peculiar situation of the parochial clergy whose chief source of income, in some cases, is derived from fees received from interments. Of these fees it would be great injustice to deprive the parties. The effects of the contemplated change on the emoluments of the parish clerks is also, in the opinion of Your Committee, a matter to be taken into consideration. The only means, therefore, of removing the evils arising from the present mode of interment in towns, seems to be to grant a power in parishes, where an additional fund is required, to raise a rate sufficient to cover all the increased expenses which may be incurred under the proposed system.

It appears difficult to carry into execution any of the provisions recommended here without the assistance of some central and superintending authority to be established for that purpose.

In conclusion, Your Committee cannot but be of opinion that a legislative enactment, prohibiting Interments in Towns and their vicinity, is required for the welfare of the community, and that it is desirable such enactment should emanate from the Government.

Your Committee will conclude their Report with the following Resolutions to which they have agreed :—

Resolved, THAT it is the opinion of this Committee :—

1. That the practice of Interment within the precincts of large Towns is injurious to the Health of the Inhabitants thereof, and frequently offensive to public decency.

2. That in order to prevent or to diminish the evil of this practice, it is expedient to pass an Act of Parliament.

3. That Legislation upon the subject be, in the first instance, confined to the Metropolis and to certain other Towns or Places the Population of which respectively at the last Census exceeded 50,000.

4. That Burials be absolutely prohibited, after a certain date, within the limits of such Towns or Places, except in the case of Family Vaults already existing, the same partaking of the nature of private property, and being of limited extent.

5. That certain exceptions, as applying to eminent public characters, be likewise admitted with regard to Westminster Abbey and to St. Paul's.

6. That certain exceptions be likewise admitted with regard to some Cemeteries of recent construction, according to special local circumstances, to be hereafter determined.

7. That within the dates which may be specified the Parochial Authorities in such Towns or Places be empowered and required to impose a Rate for the purpose of forming Cemeteries at a certain distance from the same.

8. That a power be given to the Parochial Authorities of two or more Parishes or Townships of the same Town to combine, if they think proper, for the same Cemetery.

9. That a *minimum* of distance be fixed for such Cemeteries, from the same motive that leads to their establishment—the Public Health ; and that a *maximum* of

of distance be likewise fixed, so as to secure the lower classes, as far as possible, from the hardship of loss of time, or weariness in proceeding to a great distance to attend the funerals of their relatives.

10. That the Parochial Authorities be responsible for the due and decent administration of each Burial within the new Cemeteries, in the same manner as they now are within the present Churchyards; and that, on the other hand, they be entitled to the same amount of Fees on each Burial as they at present receive.

11. That due provision be made for the perpetual possession by the Parishes or Townships of the ground on which the Cemeteries shall be made.

12. That due space be reserved, without consecration, and within the limits of the intended Cemeteries, for the separate Burials of such persons or classes of persons as may be desirous of such separation.

13. That no Fees from any such Burials in unconsecrated ground be payable to any Ministers of the Church of England.

14. That, subject to the conditions expressed in the 10th and 13th Resolutions, arrangements be made to equalise as far as possible the total amount of Fees payable on Burials within the same Cemetery, whether in the consecrated or the unconsecrated ground.

15. That considering the difficulty of fixing the same date for the prohibition of Burials within the limits of different towns, or the same distance for the construction of the new Cemeteries, and the importance of having reference to various local circumstances, it does not appear desirable to observe in all cases an uniform rule in these respects, but that the time and manner of applying the principles set forth in the foregoing Resolutions should be entrusted either to some department of the Government, or to a Board of Superintendence, to be constituted by the Act of Parliament.

16. That the duty of framing and introducing a Bill on the principles set forth in the foregoing Resolutions, would be most efficiently discharged by Her Majesty's Government, and that it is earnestly recommended to them by the Committee.

NAME of WITNESS.	PROFESSION or CONDITION.	By what Member of Committee Motion made for Attendance of the Witness.	Date of Arrival.	Date of Discharge.	Total Number of Days in London.	Number of Days under Examination by Committee, or acting specially under their Orders.	Expenses of Journey to London and back.	Expenses in London.	TOTAL Expenses allowed to Witness.
							£. s. d.	£. s. d.	£. s. d.
Robert Baker -	- - Town-clerk of Leeds.	Mr. Beckett -	24 April -	26 April -	3 days -	2	6 6 –	3 3 –	9 9 –

14 *June* 1842.

PROCEEDINGS OF THE COMMITTEE.

Mercurii, 16° *die Martii*, 1842.

Present:

Mr. Evelyn Denison.	Mr. Beckett.
Mr. Ainsworth.	Mr. Mackinnon.
Colonel Fox.	Colonel Acton.
Mr. Kemble.	

Mr. MACKINNON called to the Chair.

Committee deliberate respecting the course of proceedings, and agreed upon the following course of examination:—

1. Examination of witnesses to prove the nuisance and injury occasioned to the health of the community.

2. To suggest remedies to correct the evil, such as are adopted by other cemeteries or suggested by individuals.

3. To point out the manner in which these remedies may be applied without interfering with the vested rights of the clergy.

[Adjourned till To-morrow, at One o'clock.

Lunæ, 9° *die Maii*, 1842.

Present:

Mr. MACKINNON.

Mr. Redhead Yorke.	Lord Mahon.
Colonel Acton.	Mr. Kemble.
Sir R. Inglis.	Mr. Beckett.
Mr. Cowper.	Sir W. Clay.
Mr. Vernon.	Colonel Fox.
Lord Ashley.	

Motion made and question proposed, "1. That the practice of interment within the precincts of large towns is injurious to the health of the inhabitants thereof, and frequently offensive to public decency."—(Sir *R. Inglis.*)

Agreed to.

Motion made and question proposed, " 2. That in order to prevent or to diminish the evil of this practice, it is expedient to pass an Act of Parliament."—(Sir *R. Inglis.*)

Agreed to.

Motion made and question proposed, " That legislation upon the subject be in the first instance confined to the Metropolis, and to certain other towns or places, the population of which respectively at the last census exceeded 50,000."—(Lord *Mahon.*)

Amendment proposed, to substitute the following paragraph:—" That legislation upon the subject be in the first instance confined to the Metropolis and to populous places."—(Mr. *Vernon.*)

Question proposed, " That the original words proposed to be left out stand part of the question."

Ayes 9.	Noes 1.
Lord Mahon.	Mr. Vernon.
Colonel Acton.	
Mr. Kemble.	
Sir R. Inglis.	
Colonel Fox.	
Lord Ashley.	
Sir W. Clay.	
Mr. Cowper.	
Mr. Beckett.	

Agreed to.

Original question again proposed, "3. That legislation upon the subject be in the first instance confined to the Metropolis, and to certain other towns or places the population of which respectively, at the last census, exceeded 50,000."—(Lord *Mahon.*)

Agreed to.

Motion made and question proposed, "4. That burials be absolutely prohibited after a certain date within the limits of such towns or places, except in the case of family vaults already existing, the same partaking of the nature of private property, and being of limited extent."—(Lord *Mahon.*)

Agreed to.

Motion made and question proposed, "5. That certain exceptions, as applying to eminent public characters, be likewise admitted with regard to Westminster Abbey and to St. Paul's."—(Lord *Mahon.*)

Agreed to.

Motion made and question proposed, "6. That certain exceptions be likewise admitted with regard to some cemeteries of recent construction, according to special local circumstances to be hereafter determined."—(Col. *Fox.*)

Agreed to.

Motion made and question proposed, "7. That within the dates which may be specified, the parochial authorities in such towns or places be empowered and required to impose a rate for the purpose of forming cemeteries at a certain distance from the same."—(Lord *Mahon.*)

Agreed to.

[Adjourned till 26th instant.

Jovis, 26° die Maii, 1842.

Present:

Mr. MACKINNON.

Lord Mahon.	Colonel Acton.
Mr. Vernon.	Mr. Kemble.
Mr. Ainsworth.	Mr. Beckett.
Mr. Cowper.	Sir R. Inglis.

Committee deliberate.

Motion made and question proposed, "8. That a power be given to the parochial authorities of two or more parishes or townships to combine, if they think proper, for the same cemetery."—(Lord *Mahon*)

Agreed to.

Motion made and question proposed, "9. That a *minimum* of distance be fixed for such cemeteries, from the same motive that leads to their establishment—the public health; and that a *maximum* of distance be likewise fixed, so as to secure the lower classes, as far as possible, from the hardship of loss of time, or weariness in proceeding to a great distance to attend the funerals of their relatives."—(Lord *Mahon.*)

Agreed to.

Motion made and question proposed, "10. That the parochial authorities be responsible for the due and decent administration of each burial within the new cemeteries, in the same manner as they now are within the present churchyards; and that, on the other hand, they be entitled to the same amount of fees on each burial as they at present receive."—(Lord *Mahon.*)

Agreed to.

Motion made and question proposed, "11. That due provision be made for the perpetual possession by the parishes or townships of the ground on which the cemeteries shall be made."—(Lord *Mahon.*)

Agreed to.

Motion made and question proposed, "12. That due space be reserved, without consecration, and within the limits of the intended cemeteries, for the separate burials of such persons or classes of persons as may be desirous of such separation."—(Lord *Mahon.*)

Agreed to.

Motion made and question proposed, "13. That no fees from any such burials in unconsecrated ground be payable to any ministers of the Church of England."—(Lord *Mahon.*)

Agreed to.

Motion made and question proposed, "14. That, subject to the conditions expressed in the 10th and 13th Resolutions, arrangements be made to equalise as far as possible the total amount of fees payable on burials within the same cemetery, whether in the consecrated or the unconsecrated ground."—(Lord *Mahon.*)

Agreed to.

The following proposition was submitted as the basis of the Report, instead of the above Resolutions.

"That the present crowded condition of churchyards and other places of interment in populous places, produces results repugnant to the best feelings, and detrimental to the health of the community.

"That the parochial authorities, upon whom the law devolves the duty of providing for the decent interment of the dead, are frequently unable, and cannot be compelled, adequately to meet that exigency.

"That a central Board of Health should be constituted, for the purpose, among other things, of administering the whole matter of interments throughout the bills of mortality.

"That on application on behalf of any other district from any town council, or, where there be no town council, from any vestry meeting of any parish or parishes, the said Board may be empowered to extend its operations to such district.

"That the Committee recommend to the Government to undertake the conduct of such measure."—(Mr. *Vernon.*)

Which proposition was put and negatived.

Motion made and question proposed, "That the application of the principles contained in the previous resolutions be regulated and limited by a Board of Health, or other Board, to be constituted with powers for that purpose."—(Mr. *Cowper.*)

Ayes, 2.	Noes, 3.
Mr. Cowper.	Mr. Ainsworth.
Mr. Vernon.	Mr. Kemble.
	Sir Robert Inglis.

Negatived.

[Adjourned till to-morrow.

Veneris, 27° *die Maii*, 1842.

Present:

Mr. MACKINNON.

Lord Mahon.	Colonel Acton.
Mr. Kemble.	Mr. Cowper.
Mr. Vernon.	Mr. Ainsworth.
Sir Robert Inglis.	

Committee deliberate.

Motion made and question proposed, "That considering the difficulty of fixing the same date for the prohibition of burials within the limits of different towns, or the same distance for the construction of the new cemeteries, and the importance of having reference to various local circumstances, it does not appear desirable to observe in all cases an uniform rule in these respects, but that the time and manner of applying the principles set forth in the foregoing resolutions should be intrusted either to some department of the Government, or to a Board of Superintendence to be constituted by the Act of Parliament."—(Lord *Mahon.*)

Agreed to.

Motion made and question proposed, "That the duty of framing and introducing a Bill on the principles set forth in the foregoing resolutions would be most efficiently discharged by Her Majesty's Government, and that it is earnestly recommended to them by the Committee."—(Lord *Mahon.*)

Agreed to.

[Adjourned to Thursday next, at One o'clock, to consider Report.

Jovis, 9° *die Junii*, 1842.

Present:

Mr. MACKINNON.

Lord Mahon.	Sir Robert Inglis.
Mr. Vernon.	Mr. Kemble.
Sir W. Clay.	Mr. Yorke.
Mr. Beckett.	Mr. Ainsworth.
Mr. Cowper.	

Committee considered the Draft of Report submitted by the Chairman.

I. Head of the Report amended and agreed to.

II. & III. Heads of the Report read.

Motion

Motion made and question proposed, "To leave out all the words of the 2d & 3d heads of the Report, for the purpose of inserting the following words:"

"In order to remedy the evil thus described, Your Committee recommend that such legislative enactments may be framed as may prevent the interment of the dead in spaces too confined, or dangerously contiguous to the habitations of the living. It has been found, however, impracticable to define specially the places which should be the subjects of this legislation, or the precise times or limits within which it should be applied, for the attainment of the proposed object; for the nuisance has been experienced not only in towns of the first class, but even in some where the population does not exceed 5,000, though the difficulty of obtaining a remedy is necessarily greater in proportion to the area covered by contiguous houses; but as the only resource afforded by law for supplying additional burying-ground to a parish is by the method of church-rate, objection is frequently taken from collateral motives to apply that measure to relieve the mischief. There are also some old towns which labour under the additional difficulty of comprising within their circuit of uninterrupted buildings several parishes without any vacant space contained within their parochial limits. It would evidently be desirable, both for the interest of the rate-payers and for the benefit of the entire community, that in such cases some central authority should be invested with the discretion of combining these parishes into unions for the purpose of a common cemetery.

"It does not appear indispensable for the public health that an unqualified prohibition should be enacted of interment within any defined distance from the circumference or the centre of such places as may be placed within the category of populous districts, for the purpose of legislation on this subject. It might tend to vexatious hardship on individuals, and to needless expense to parishes, if such prohibition should be resorted to, unless under the superintendence of some discretionary authority which might straiten or relax the rule according to the exigency ascertained in the respective cases. The irregular shape of towns, their tendency to spread in directions conformed to local circumstances, and the varying eligibility of ground in the neighbourhood for the purpose of cemeteries, preclude the adoption of any fixed minimum of distance. Moreover, on this head, Your Committee feel themselves bound to respect the case of Westminster Abbey and St. Paul's, of private vaults, of cemeteries such as the Necropolis, in the centre of Liverpool, and of the burial-grounds of the quakers, as described in the Appendix to this Report. Some unobjectionable cemeteries in the vicinity of the Metropolis, sanctioned by recent Acts of Parliament, would probably be found to come within the ban of any rigorous rule defining such a minimum of distance as would be desirable under any peremptory principle of restriction. Your Committee therefore do not consider themselves warranted in recommending any measure as imperative on the towns to be affected thereby, which should not be of so elastic a character as to be capable of adaptation in every instance to the right feelings, the well understood interests, nay, even the respectable prejudices of the population. Under this latter head they would class the prevalent aversion to any methods by which decomposition of the corpse would be attained more speedily and innocuously, and the desire to share with members of the same family a common place of sepulture. They would treat these dispositions towards the departed with all the tenderness compatible with the welfare of the living. Neither are they insensible to the consideration that removal of funerals to an increased distance would involve some augmentation of expense and inconvenience to the poorer classes, unless some additional facilities could be provided on their behalf through combined arrangements, which might be provided by Boards acting in the several districts, or from some central authority invested with adequate powers.

"The general scope, then, of the recommendations of Your Committee would be to furnish facilities to such towns or districts as may desire aid on this subject, and to enforce prohibition only where actual evil shall demand it. With this view they would suggest the propriety of establishing by Act of Parliament a Board to which should be entrusted the duty of providing and regulating cemeteries for the Bills of Mortality, and which should be enabled to exercise similar powers on behalf of any other town on application of any town council, or, where there be no town council, of any vestry meeting. Your Committee are of opinion, that the duty of framing and introducing a Bill for effectuating these objects would be most efficiently discharged by Her Majesty's Government, to whom they therefore earnestly recommend it."—(Mr. *Vernon.*)

Question put and negatived.

II. & III. Heads of the original Draft of Report amended and agreed to.

To Report, with Minutes of Evidence and Appendix.

LIST OF WITNESSES.

Jovis, 17° die Martii, 1842.

Page

Mr. Henry Helsdon - - - - 1
Mr. John Irwin - - - 5. 17
Mr. Samuel Pitts - - - - 8
Mr. Moses Solomons - - - - 12
Mr. William Burn - - - - 13
John Eyles - - - - 17

Veneris, 18° die Martii, 1842.

Mr. George Whittaker - - - 19
Mr. Thomas Munns - - - - 25
Mr. Robert Carr - - - 28
Mr. James Michael Lane - - - 32
Mr. Edwin Eddison - - - - 35

Mercurii, 6° die Aprilis, 1842.

George Alfred Walker, Esq. - - 36
The Rev. Henry John Knapp, D. D. - 45

Jovis, 7° die Aprilis, 1842.

Valentine Haycock - - - - 48
Bartholomew Lyons - - - - 53
John Eyles - - - - - 57
Michael Pye - - - - - 62

Lunæ, 11° die Aprilis, 1842.

Colonel Acton, M. P. - - - - 65
Peter Ainsworth, Esq. M. P. - - 66
The Rev. J. C. Abdy - - - 67
Edward Charles Copeland - - - 70

Jovis, 14° die Aprilis, 1842.

Colonel Fox, M. P. - - - - 72
The Rev. James Endell Tyler - - 72
James Anderton, Esq. - - - 79
Mr. George Starkins Wallace - - 79
The Rev. John Channing Abdy - - 81
The Rev. John Houghton - - - 82
William Miller - - - - - 84
William Ford - - - - - 87
Mr. Joseph Harvey - - - - 89

Lunæ, 18° die Aprilis, 1842.

John Bowring, Esq. LL. D. - - - 92
Colonel Patrick Campbell - - - 95
The Rev. Frank Hewson - - - 97
Mr. Robert Baldock - - - - 99
Sir James Fellowes - - - - 102
Mr. Daniel Richard Harker - - 103
Mr. George Yarrow - - - - 106

Mercurii, 20° die Aprilis, 1842.

Page

George Thomas White, Esq. - - 108
George Alfred Walker, Esq. - - 110

Jovis, 21° die Aprilis, 1842.

Dr. George Frederic Collier - - 112
Thomas Tagg - - - - - 115
Henry John Parker - - - - 119
William Shaw - - - - - 119
James Anderton, Esq. - - - 120

Veneris, 22° die Aprilis, 1842.

Mr. John Charles Atkinson - - 122
Mr. George Dorkin Lane - - - 126
William Chamberlain - - - 129

Lunæ, 25° die Aprilis, 1842.

Dr. Robert Bentley Todd - - - 133
The Rev. John Russell, D. D. - - 137
Mr. Robert Baker - - - - 143
William Beckett, Esq. M. P. - - 151
Sir James Fellowes, M. D. - - - 151
Mr. Charles Ewens Deacon - - 152

Mercurii, 27° die Aprilis, 1842.

Mr. Charles Ewens Deacon - - 155
James Copland, Esq. M. D. - - 156
Jordan Roche Lynch, Esq. M. D. - 160
The Rev. Evan James - - - 164

Veneris, 29° die Aprilis, 1842.

The Rev. Henry H. Milman - - 166
The Rev. John Trevor Robinson - - 172
The Rev. William Weldon Champneys - 175
Dr. Holt Yates - - - - - 178
Mr. John Garland - - - - 179

Lunæ, 2° die Maii, 1842.

Sir Benjamin Brodie, Bart. - - 179
The Rev. Evan James - - - 182

Jovis, 5° die Maii, 1842.

Right Rev. the Lord Bishop of London 183

MINUTES OF EVIDENCE.

Jovis, 17° *die Martii*, 1842.

MEMBERS PRESENT.

Colonel Acton.	Mr. Beckett.
Mr. Ainsworth.	Mr. Kemble.
Lord Ashley.	Lord Mahon.

W. A. MACKINNON, ESQ. IN THE CHAIR.

Mr. *Henry Helsdon*, called in; and Examined.

Mr. *H. Helsdon.*

17 March 1842.

1. *Chairman.*] YOU are aware that this Committee is appointed for the purpose of investigating the necessity of an alteration in the present law with regard to interment in large towns or their precincts?—I am.

2. Have you turned your attention to the subject?—Somewhat.

3. Are you connected, directly or indirectly, with any of the cemeteries about this town?—Not at the present time.

4. What is your occupation?—I am collecting clerk of James Binyon Cooper, iron founder, of Drury-lane.

5. Have you in any manner been connected with burial-grounds?—Yes.

6. In what manner?—I have been employed as the assistant dissenting minister in a ground.

7. Have the goodness to state to the Committee what came under your observation when you were in that situation?—My employment has principally been in the City-road, Bunhill-fields, but more particularly at the New City Bunhill-fields, for, in consequence of the ground being of such very old standing, I believe 200 years or upwards, and the charge having been increased some five or six years since by the city corporation for the interment of bodies, a new ground was opened on speculation in Golden-lane, Barbican, a large space of ground, but situated in a densely-populated neighbourhood, and chiefly of the lower orders; at that ground I have principally officiated as the assistant-minister of the Baptist persuasion.

8. How were the graves generally made?—The plan on which the grave was opened was quite in accordance with that generally observed or adopted throughout London; that is, the opening, what is called a public grave, 30 feet deep, perhaps; the first corpse interred was succeeded by another, and up to 16 or 18, and all the openings between the coffin boards were filled up with smaller coffins of children. When this grave was crammed as full as it could be, so that the topmost coffin was within two feet of the surface, that was banked up, and that piece of ground was considered as occupied.

9. What is the greatest number of interments which have taken place in one day?—The largest number of burials I have ever attended on one day was during the raging epidemic called the influenza, I think, in 1837. On one Sunday afternoon I buried 21 persons myself; that was in Holywell Mount ground, situated about a quarter of a mile distant, in the Curtain-road.

10. Lord *Mahon.*] You said the greatest number you ever attended; were there other burials on that day, that you did not attend?—No; I officiated in the whole of the burials that Sunday; the person who had officiated there occasionally being affected, as other parties were, with the influenza, I supplied his lack of service on that occasion.

11. *Chairman.*] To what chapel was that burying-ground attached?—It was

Mr. *H. Helsdon.*

17 March 1842.

attached to no place at the time, but it has been since attached to the church called St. James's New Church, in the Curtain-road; that is the ground I buried the greatest number in on one occasion, in Holywell-lane.

12. Is this plan of interment general, or was it only on that particular occasion?—I think it is pretty general; the printed statistics with which I was furnished by Mr. Walker will show it is a public and open acknowledgment, that in a certain portion of the burial-grounds for the lower orders, it is generally understood that a grave shall be opened, a public grave, covered with planks, but never filled up until it is covered almost to surfeiture with bodies.

13. Lord *Mahon.*] Do you apply that to other large towns as well as London?—No, to London; my knowledge is confined to London.

14. Mr. *Kemble.*] Do you mean it to confine to those large burying-places only, or to include parochial churchyards also?—I apply it to parochial churchyards also; the printed statistical accounts with reference to fees, and so on, give a statement to the public that the public graves are to be gradually filled up.

15. Do you know that of your own knowledge?—I know it from the printed statements submitted to Government.

16. Colonel *Acton.*] How long would it take before one was sufficiently filled to be covered over?—That would depend on the number of applications made on the average; in some instances it would take a fortnight, in other instances it would take a little longer.

17. Mr. *Kemble.*] You were understood to say you officiated at the New Bunhill-fields ground; does your knowledge extend to the general parochial churchyards connected with parish churches?—No, not personally.

18. *Chairman.*] Can you state whether you ever found any disagreeable smell or effluvia arising from those grounds with which you have been connected?—After the first year had passed away, for I officiated in that ground about four years during the heat of the summer, when those graves were re-opened on the Sunday afternoon, when most of the funerals take place, in consequence of their being chiefly among the Irish and the lower classes of society, by reason of their burying rather cheaper than at other grounds, they were exceedingly offensive; the swarms of some kind of black fly, which I am not able to explain the nature of, but I suppose generated in this house of corruption, were certainly so offensive, and the noisome stench arising from those deep graves was very unpleasant, so that it was difficult in the heat of the summer for any man of sensibility to discharge the duties necessarily devolving upon him.

19. Speaking from your own knowledge, what is the effect of such exhalations on the gravediggers or persons obliged to be in the immediate neighbourhood?—So far as my own personal knowledge goes, I can speak only to one, and that was a gravedigger in New Bunhill-fields; I have known him obliged to be drawn out of those very deep graves after being in half an hour or three quarters of an hour, in consequence of his being overpowered with the heat and the stench accumulated there, and more particularly in opening those graves where ten or twelve corpses had already been interred; and where they began to run, the offensive exhalation was dreadful.

20. You mention that there was a great number in each grave; what was the average number in each grave?—I should think in all those public graves, as they are called, they would average from 18 to 20.

21. Colonel *Acton.*] What depth is the grave?—They are generally dug from 25 to 30 feet deep. I wish to explain one matter, that the earth is thrown up on each side the grave two feet deep, so that the last coffin deposited in the grave looks tolerably deep; but when the whole of the earth, or sand or gravel is thrown aside and the works all removed, and the earth is again levelled with its common surface, I am quite certain, beyond all mistake, they have not been more than two feet below the surface of the ground; to all appearance it looks four or five feet, but when it is levelled by the removal of the earth, it is very thin; with the banks up it looks differently.

22. Mr. *Kemble.*] You were understood to speak of the effect the first year; what was the effect the subsequent years?—Every subsequent summer this offensive effluvia increased, and even the sight of the coffins, for the fact is that as the coffins lie one on another in succession from the bottom to the top, the next grave that is opened alongside of that, to make the very most of every inch of the speculation of any proprietor of such ground; nay, I have been witness, from

Sunday

Mr. *H. Helsdon.*

17 March 1842.

Sunday to Sunday, to my certain knowledge, of from 16 to 18 coffins being placed all in succession, rising one above another, and the horrible stench arising from those, and the swarms of flies and insects accumulated, it is horrible to conceive; and I have gone away sometimes so loathing and disgusted as scarcely to be able to endure myself, and I know the tendency of these things is most immoral and injurious.

23. *Chairman.*] What is the general character of the gravediggers, and persons employed in that way?—I am sorry to say that the situation of life they are called to fill, and the nature of their avocation is such, that they are driven from extreme necessity to an almost unusual use of ardent spirits, sometimes to allay that which they conceive to be fearful in the effluvia, and to take off the effect from the system; and at other times, being a vitiated class of characters, I am sorry to say, from what I have seen from five or six years being connected with the undertakers, I have no good opinion I can give of them; they are initiated into a habit of drinking, but the gravediggers, particularly, I have observed to be a low, depraved, drunken class of men. I have seen the men that used to dig the graves of which I am speaking, on a Sunday afternoon, obliged to be turned out of the ground and sent away by the conductor of the ground, in a state of inebriation that was disgraceful to any man.

24. Mr. *Ainsworth.*] What wages are they able to earn?—They generally have some 15*s.* or 18*s.* a week; they pick up, perhaps, 4*s.* or 5*s.*, or more, as gratuities from the persons attending.

25. Mr. *Kemble.*] When you speak of the immoral effect of it, do you mean that the exhalations from those graves compel them to drink?—Yes.

26. Lord *Mahon.*] You have stated the neighbourhood to have been thickly peopled; have you observed within your own knowledge any bad effects from those exhalations?—I can only say, that the most part of the causes of death, as far as my inquiries and knowledge have gone, has been from intermittent fevers; I can scarcely explain it in proper terms, but low intermittent fevers, carrying off persons, but more particularly children. I have buried, myself, 10 or 12, or 14 in the Sunday afternoon.

27. Have you ever been in the neighbouring houses, in which this effluvia prevailed?—No; I have nothing to do with any private portion of the neighbourhood; my duties were in the ground.

28. On what ground do you give your former answer, as to believing those houses to be affected with the exhalation, as you state that you have never been in one of them?—Because the party who conducted the ground was himself an undertaker, and whenever inquiries were made as to the causes of death, whether the body of a young man or a young woman, when I have asked the causes of those deaths, he has said, "Oh, fever, fever; influenza, influenza!"

29. Mr. *Ainsworth.*] How far does the intermittent fever extend; is it in the immediate neighbourhood?—Yes; I speak of the immediate neighbourhood.

30. What do you mean by the immediate neighbourhood?—I mean all the streets and lanes adjacent to the ground; but I do not attribute the intermittent fever to the effluvia of the ground, but that it may arise from the filthy state, the want of proper cleansing, and so on; I wish to confine myself to facts, but I have reason to believe that there were more cases of fever here than in general.

31. Do they arise from their being in the vicinity of this burial-ground?—I cannot speak to that.

32. *Chairman.*] As far as your observation goes, do you think it affects the morals of the people?—I am fully convinced it does, and that to a very serious extent.

33. On the same principle as you think it affects the morals of the gravediggers?—Those parties come in and witness the sort of carelessness in the discharge of duties; there is no difference made, the coffin is placed in the ground. I know on one occasion a body was, it might be perhaps from accident, but from what took place I am persuaded arising from drunkenness, a body was pitched into the grave, and it was two hours before it could be set to rights; it was very painful; I do not attribute it all to inebriation.

34. Where do you reside?—I reside now in Drury-lane, near to my office.

35. Can you state to the Committee any particulars respecting a burial-ground in that neighbourhood?—I verily believe it to be one of the very worst in London.

Mr. *H. Helsdon.*

17 March 1842.

36. Lord *Mahon.*] Have you any personal knowledge of it?—My sleeping-room commands a side view glance into the ground itself, and I have witnessed parties having on the Sunday to stand, or, to my knowledge, to wait for ten minutes or a quarter of an hour before the minister returns from church; they have no place to retreat to, but the plan adopted there has astonished me beyond anything, and no person passing or repassing in Drury-lane of respectable character would suppose that any such plan as that adopted, to my own knowledge, could take place. As soon as possible after the interment of a corpse it is banked up, frequently in the presence of the parties, who wait to see that everything in their judgment is safe and sound, and after two or three weeks it is all levelled and raked over as comfortable as a garden to look at; and, though that ground has been about a century opened, there is no trace of more than some 60 or 70 persons having been buried there at all, though I have no doubt there have been as many thousands.

37. *Chairman.*] What is the space?—It might be perhaps 200 feet square.

38. Viscount *Mahon.*] You say you have no doubt that sixty or seventy thousand have been buried there since it has been opened?—I have no doubt of it.

39. On what grounds do you make that calculation?—I made the calculation on the number that may be supposed to have been buried every week for the last century.

40. Mr. *Ainsworth.*] What is the name of that burial-ground?—I think it is called St. Martin-in-the-Fields; it is attached, I believe, to that parish; it is situated in the centre of Drury-lane, near Little Russell-street.

41. *Chairman.*] You mean to say that, in that densely-populated neighbourhood, sixty or seventy thousand bodies have been placed in a space 200 feet square?—Yes.

42. Mr. *Kemble.*] You say you sleep in a room which has a side view of that ground; can you state whether you yourself have experienced any injurious effect on your own health?—I have resided there only a few months, therefore I cannot for myself, individually, say anything upon that subject; I have never, to my knowledge, experienced any ill effects.

43. How many months have you resided there?—Seven months altogether; most part of the time I have been there I have been confined to my bed.

44. *Chairman.*] Since you came into that neighbourhood you have been confined by illness?—Yes; not arising from that cause.

45. How far is your house from that ground?—I should think not more than 30 yards, and scarcely that.

46. Mr. *Kemble.*] Have you heard any complaint from your neighbours who reside there, of the evil effects which have arisen from it?—Since I have been in the situation I am now filling, in the service of Mr. Cooper, I have heard different neighbours complain of that ground as being, as some have expressed, an infernal nuisance, and some one term and some another; but I never heard any express any but the strongest opinion that it was a notorious nuisance in such a neighbourhood, so surrounded with people, and in the immediate neighbourhood of the theatres, and with a cast-iron open gate, eight or ten feet high, for the effluvia to flow into the street.

47. Mr. *Ainsworth.*] Have you yourself experienced any inconvenience from the effluvia?—I cannot say that I have, but I have been there but a very short period.

48. Have you been there during any part of the summer?—No, my windows have been closed; I was placed there not from choice, but necessity.

49. How many interments are there in the course of a week?—I should think, from what little I can say, they may average from 15 to 16 or 17.

50. Do you conceive there have been any depredations committed there, any bodies stolen?—I ought not to say what I have heard, because it would not be evidence; but if I were to say what I have heard, I am sure the detail would be disgusting in the extreme.

51. *Chairman.*] Have you anything further to say on the subject, bearing on these points?—I have merely to say that so far as my own personal knowledge is concerned, and conversant as I have been with several grounds in London, officiating here and there as circumstances and occasion might require, I have found the same evil prevails in every ground, and that which I abominate most of all is, that it is a monopoly of some one or two individuals, who are irresponsible to any party or parties or power; that there is no control exercised

over them; that it is a private piece of ground which they may devote to a burial-ground, or they may sacrifice every feeling of humanity and honour by appropriating that to building purposes, or any purposes in which it may be most profitable.

52. Lord *Mahon.*] Have you known any instances where they have done so?—I rather think the advantages arising from such monopoly are too great for the parties to appropriate them to any other purpose.

53. Then why do you express a fear that it might be so devoted?—I think it would not be worth their while so to devote them.

54. Mr. *Ainsworth.*] Is the burial-ground in Drury-lane connected with any parish?—I believe it is connected with St. Martin's-in-the-Fields, but that is a part of the clerical domain.

55. Does not the clergyman see to the exercise of any control over it?—He simply discharges his duties when called upon to attend a funeral; I am not aware of any further interference on his part.

56. Mr. *Kemble.*] In officiating on those funerals, do you officiate for any particular denomination?—No, as a public character.

57. Do you use the funeral service of the Church of England?—That is matter of choice; sometimes a short address, with extemporary prayer, has been preferred by some parties.

58. You are a dissenting minister?—I am.

59. Were you appointed to this office at the New Bunhill-fields?—Yes.

60. Mr. *Ainsworth.*] Are you connected with any congregation as a minister to any regular chapel?—No, I am not.

61. Where do you generally officiate; among the Methodist or the Independent connexion, or what?—I am more particularly connected with the Baptist denomination.

62. Mr. *Kemble.*] But you do not officiate now at all?—I do not, nor I have not for the last four years.

Mr. *John Irwin* called in; and Examined.

63. *Chairman.*] WHAT is your situation in life?—I am a house painter.

64. Are you connected in any way, directly or indirectly, with the cemeteries about this town?—Not in any.

65. Where do you reside?—I reside in the vicinity of Clare Market

66. How long have you resided there?—I have been in the vicinity nearly twenty-eight years; Clement's-lane is my place of abode.

67. Is your work chiefly in-doors, or out-of-doors?—Chiefly out-of-doors; sometimes I am in the country, sometimes round the neighbourhood.

68. In what state is your health?—At present it is pretty tolerable.

69. Have you been afflicted during your residence there?—I certainly have, very much so, at times, with a giddiness.

70. To what do you attribute that?—My house is situated in a burial-ground; I may say situated in it, for it looks over a burial-ground, called Portugal-street Burial-ground, belonging to the parish of St. Clement Danes.

71. Does your living there, in your opinion, affect your health?—I consider that it does affect my health, but not so much as it has done that of my family; generally, I attribute my health being better to my being out-of-doors; my wife has been ailing ever since we have been in that place.

72. Mr. *Ainsworth.*] Have you been married twenty-eight years?—No; I have been married twenty-four, last October.

73. Lord *Mahon.*] Have your children suffered also in health?—Yes, I certainly have had children suffer.

74. *Chairman.*] You attribute that to your being in the neighbourhood of the graveyard?—I do; for this reason, we never ailed anything till I came to that house.

75. How long have you lived in the house?—I have been in that house only since October 1838, three years.

76. Ever since you have been in that house, yourself and family have been affected?—Yes; the whole of my family have been unwell.

77. What is your reason for attributing that to the neighbourhood of the churchyard?—I had a lodger of the name of Britt, a man who had a little income, and who resided there as a quiet place, and his wife was taken with typhus fever;

Mr. *John Irwin.*

17 March 1842.

fever; he went to see his wife at the fever hospital; he came home in a state of stupor, and died I believe four or five days afterwards; I also had a lodger of the name of Rosamond, Mr. and Mrs. Rosamond; Mr. and Mrs. Rosamond had the typhus fever, both went to the fever hospital; Mrs. Rosamond recovered, the husband died in the fever hospital and was buried in Portugal-street burying-ground, in the poor ground.

78. Has the mortality in your neighbourhood been great?—Very great.

79. Have the symptoms of disease been similar to those you have experienced?—It has been generally said so, typhus fever.

80. State what you know yourself?—I have stated the whole of my family; I have stated with respect to Mr. and Mrs. Rosamond, they both went to the fever hospital.

81. Mr. *Ainsworth.*] How long had they been lodgers with you?—Not above three or four months.

82. Were they in a good state of health when they came to you?—They were, and he was a man employed in Farringdon Market, a porter.

83. In good health?—Yes, a ruddy complexioned looking man.

84. How soon after he became a lodger with you was he attacked with this fever?—I should say almost immediately.

85. *Chairman.*] How long was it after you went into that neighbourhood that you first began to imagine it originated in your vicinity to the graveyard?—Within six weeks after we went to that house the whole of my family were attacked. I had a child, a very fine boy about six years of age, who had the typhus fever, at least I rather thought it was the typhus fever; he was taken very ill indeed, and came home with a relaxed state of the bowels, the glands of his neck were swelled, speaking within compass, as big as a pigeon's egg on each side, and he died in six days afterwards.

86. You attribute his death to that cause?—I consider that typhus fever.

87. Do you conceive that that originated in the vicinity to the churchyard?—Yes, Mr. Carpenter, who attended the child, said it was.

88. Do you know any instances of persons who have attended funerals in that yard being injured in their health?—There is one thing comes to my mind; at the time that the alterations were going on of King's College Hospital; it was formerly a receptacle for the poor; the gate being open, I was going past the place, when I saw a gravedigger, and went up and said, "This is a deep grave;" he said, "Aye, it is indeed, and yesterday I was so very much affected I did not know how to contain myself." "Why, what was the matter?" He said, "I broke into a place, and if I had not made my escape I should have died instantly," for the effluvia was so strong, as he told me, that it knocked him down; he said, "I came on with such a staggering that I was obliged to go up and get something to drink."

89. What has come under your own knowledge to make you think that the effluvia arising from that churchyard is unwholesome; you have mentioned the health of your children and yourself, what have you seen in respect of your neighbours?—I have stated the case of my family; I have had the typhus fever myself.

90. Have you known any persons taken ill after they attended funerals there?—Yes, a brother-in-law of mine, Clark, an undertaker, attended a funeral at Spa-fields, and he told me he was very ill.

91. Was he ill?—I know he was ill, of course.

92. Do you believe it was owing to that?—I do think it was owing to that; the doctor who attended him said that that was the cause of his death, the effluvia that came from the coffin, and I think it was, because I had been affected myself in that way.

93. Lord *Mahon.*] Do you say that this brother-in-law of yours died?—Yes, he did, five days after he came home.

94. *Chairman.*] Have you yourself felt any bad smell or effluvia from that churchyard?—I have.

95. So as to be very offensive?—Yes; I have mentioned before the case of Mr. Britt, who was buried from my house; they kept him there in the house for 12 days, or nearly; he was buried within 10 feet of my wall; the grave was opened, and a fortnight after that there was another put a-top of him, but previous to that the smell from that grave was so nauseous I could hardly contain myself; I was obliged to keep my window down; I saw the grave opened a fortnight

fortnight afterwards; I considered with myself, what an abominable shame this is to open the grave and bury another so soon afterwards; I went round and looked at the grave; I stopped till the funeral came; I saw the corpse deposited; I was rather curious, and took out my rule and measured the depth; I measured at the foot then, when the other coffin, which was laid upon it was put in, it was scarcely two feet from the surface; I made this reply to the gravedigger standing by, "If this be the case, well typhus fever may rage in the manner it does in this neighbourhood;" he made me no answer; I went across the churchyard; there, all the workhouse people on the right-hand side seemed to rejoice at such a proceeding. Considering the inclination of the coffin at the foot, there was not above one foot nine from the surface.

96. Mr. *Ainsworth.*] You say the paupers seemed to rejoice at what?—They seemed to rejoice that there should be such interference; it appeared to them as if I interfered in their behalf.

97. *Chairman.*] Your opinion is, that the smell of the dead bodies as it were evaporates through the small depth of earth over the coffins?—Yes, I am satisfied of that by my own feelings; I was employed some time ago in St. Sepulchre's, at the time of the great alteration going on there; this was the first thing that excited my feeling in this business: I was at work there when there was what was called a clearing-out of the vault; I was at work in the north aisle, and there is a vault-door which may be seven feet by three and a half; I was at work about four feet from this vault-door; there were four men and a boy at the clearing-out, as it was called; they were taking baskets after baskets of, I may almost say, decomposed matter; but it does not come to that, it was arms and legs, and flesh, in a dried state, something like russet-leather; they were taken to a corner in the churchyard on the left-hand side, and deposited in a sort of bone-house, I think it was called; there were probably some pounds of tobacco burning during the conveyance of this decomposed matter.

98. Did it emit a bad smell?—I was taken so ill with the smell that I left work for three days; there were four men and a boy employed in that place, and one man, a particularly robust-looking man, spoke to me, as I was near, and said, "Dear me, I can hardly stand it;" every now and then they were missing for two or three hours; we remarked, they were gone to take their drops, "Aye, no wonder at it, for I think we shall make a drop of it if we do not mind;" however, I was ill for three days. One man of the name of Fergusson that worked there also, I cannot say that his illness was caused by it, but he left his work and was found dead in his bed.

99. How long after?—About a fortnight after my illness; I was away three days.

100. The impression on your mind is, that his death was the consequence of exposure to that smell?—No, it is not exactly, but I have no other reason to say but what it may be; the man had been very well ever since I knew him, and I had known the man up to that time for 15 years; it is, I should think, six years ago since the finishing of that church.

101. Mr. *Ainsworth.*] You are a house-painter?—Yes.

102. Do you keep your paints in your house?—I am a journeyman painter, and merely job on my own account; I do not keep much paint.

103. You do not think your family have suffered from the smell of the paint in your house?—No, I do not; I do not think that is the case, because they did not suffer in my former house.

104. Had you paints in your former house?—Yes.

105. Your family was in good health at your former house?—Yes, I have been a house-painter all my life.

106. Mr. *Kemble.*] You came to reside in your present house, you say, in 1838; of what does your family consist?—My family consisted at that time of three girls and two boys, and myself and wife.

107. One of your children died?—Yes, at six years of age.

108. The others have all been attacked with fever?—Yes.

109. Do you find that their general health is injured by your residing in that place?—I can safely say I am sure of it.

110. They were very healthy before, and are now ill?—Yes, they are complaining continually of giddiness, and their health is bad: some are grown up. I have said, I cannot help it; I will get out of it as soon as I can; but my circumstances will not admit of it: my business lies round the neighbourhood, and the place is cheap-rented, or I would not stop in the place.

Mr. *John Irwin.*

17 March 1842.

111. *Chairman.*] As far as your observation goes, have similar effects been experienced by persons residing about this churchyard to those which you state have occurred in your own family?—I cannot exactly answer that question, because I do not make myself much known among them; I have heard it rumoured that such a one has the typhus fever: all Lamb's family, for instance, went into the fever hospital; two of them died. I have been very curious in a sort of calculation. I have been very much excited by the disagreeable things I have seen in burying-grounds; I may say most revolting.

112. Mr. *Ainsworth.*] Do you mean to say, in this burial-ground in Portugal-street?—Yes, that is the one I have particularly seen. This I have done from my own suggestion; the names of those who died of typhus fever in my house, Mr. and Mrs. Rosamond, the husband died in the fever hospital; Mr. and Mrs. Britt, the wife in the fever hospital, but Mr. Britt went to see his wife, was brought home in a state of stupor, and died about five days afterwards, as I have stated, and buried about 15 feet from the wall of my house. Mrs. Britt's sister attended at the house, taken ill, and died three weeks afterwards, she went to Clerkenwell, and died of the typhus fever. George Starks, another of my lodgers, had erysipelas, attended King's College Hospital, was told he never would get well unless he went into the country; he left, and is now about, and stout and hearty.

113. There are three individuals who have died, to your knowledge?—Yes; an account taken of deaths in November 1839, in the vicinity of Clare Market: Mr. Clark, Mrs. Hayes.

114. Do you know anything of those?—I have seen most of the funerals.

115. Did you know the whole of them?—Not all of them; I have seen most of the funerals go to and fro in the street.

116. You do not know the real cause of their deaths?—No.

117. In what state are the streets in your neighbourhood, as regards the drainage or sewage?—The sewage is very bad indeed.

118. Are there any regular drains?—The market is very badly drained indeed.

119. Are there any drains?—There is a grating, but I cannot say whether there is a drain; I have only to say there is one entrance into the market, the entrance is about 10 feet, and there is a cesspool about 14 feet deep, and the filth, which is plain to be seen, oozes out from between the stones.

120. The neighbouring streets are not quite in a fit state?—I consider the burial-ground side is the worst place I ever saw in my life; the smell I refer to in the houses that look into the burial-ground.

121. The question refers to the streets?—The drainage appears wholly stopped up.

122. The water does not pass away?—No, it does not; the whole of those houses are let to lodgers; there is one man that holds half the street; he lives away, and does not attend to the matter at all.

Mr. *Samuel Pitts*, called in; and Examined.

Mr. *Samuel Pitts.*

123. WHAT is your occupation?—I am a cabinet-maker by trade.

124. Are you connected in any way with the cemeteries which have been formed of late?—No, I am not.

125. Where do you reside?—At No. 14, Catherine-street, Strand.

126. Are you an attendant in Enon-chapel, Clement's-lane?—I was formerly.

127. What description of dissenters hold that chapel?—The Baptists held it.

128. Will you state to the Committee generally the state of the interments in the cemetery of that chapel?—At the time I attended it, which was from about the year 1828, for six or seven years, there were interments, and the place was in a very filthy state; the smell was most abominable and very injurious; I have frequently gone home myself with a severe headache, which I suppose to have been occasioned by the smell there, more particularly in the summer time; also there were some insects something similar to a bug in shape and appearance, only with wings; about the size of a small bug; I have seen in the summer time hundreds of them flying about the chapel; I have taken them home in my hat, and my wife has taken them home in her clothes; we always considered that they proceeded from the dead bodies underneath; there was nothing but the thin boards

boards between the depositary and the chapel, and there were openings between owing to the shrinking of the boards.

129. Mr. *Ainsworth.*] Do you mean to say there was nothing between the vaults and the chapel but the thin boards?—No, the thin boards and the joists; there was not the usual lath and plaster.

130. Were they buried in simple coffins?—Yes; I never heard that there was a leaden coffin in the place.

131. How long has this been allowed?—It was previous to my attending the chapel; I first went in the beginning of 1828.

132. Colonel *Acton.*] Is this in existence now?—Yes; the chapel, I believe, is not occupied now as a place of worship, but the burial-place still exists; and from what I hear the coffins are piled up now higher than ever.

133. *Chairman.*] What is the size of the chapel?—I suppose about 50 or 60 feet by 30 or 40.

134. That is the length of the vaults underneath?—Yes, it must be, but there is that which takes up a great part of the space; a sewer runs longways across; there is an arch built which reaches up nearly to the flooring.

135. What number of dead bodies are there in this place?—I should suppose ten or twelve thousand.

136. In a space of 50 or 60 feet by 40?—Yes.

137. Mr. *Ainsworth.*] Was the effluvia so objectionable that the service ceased in consequence?—That was not the cause of my leaving; it was in consequence of the minister dying. It was anything but eligible.

138. *Chairman.*] What was the effect of burying this number of bodies in this space under these circumstances?—I felt the headache, and I considered that that was the cause of it; it was very injurious to the neighbourhood round.

139. Mr. *Kemble.*] Do you reside in the neighbourhood yourself?—I do not.

140. Lord *Mahon.*] How many hours were you there in a day?—About five hours; when I went twice to worship, four or five hours.

141. *Chairman.*] Has it come under your observation that the persons attending the chapel have experienced the same inconveniences which you did?—Yes, frequently persons have been taken out of the chapel fainting in the middle of the service.

142. Mr. *Kemble.*] Has that been in winter or summer?—Both winter and summer, more particularly in summer.

143. Was the congregation a crowded one?—Not latterly; it fell off.

144. Have you seen that occur when the congregation was not crowded?—Yes.

145. *Chairman.*] Is there any other mode by which the exhalation of the dead bodies can evaporate except through the chinks of the floor?—There is only one small place about four feet by five, that is the only outlet; the coffins are piled up nearly to the floor.

146. What is the depth of the vaults to the floor of the chapel?—About six feet.

147. In a space of 59 feet by 29, with a dept of 6 feet, how can there be 12,000 bodies?—A great number were buried, in the first instance, till it got too full.

148. Buried below that depth?—Yes.

149. Your statement is, that in the space of 59 feet by 29, they have buried as many as 12,000 bodies?—From what I have understood, a great many have been removed, to make room for others; I did hear, and it came through a woman who used to wash for Mrs. Howse, that they used to burn the coffins under the copper, and frequently in their own fire-place.

150. What became of the remains?—I do not know what became of them, unless they were shovelled all together, which I believe to be the case in this place.

151. Mr. *Kemble.*] Were the burial fees small here?—Yes, they were.

152. Who had them?—The minister had them.

153. It was part of his emolument?—Yes.

154. To what did they amount?—I do not know, but I have known as many as nine or ten buried on one Sunday afternoon; this I had from the minister's own mouth.

155. You stated that a drain passed into those cellars under the chapel; is there any possibility that when they took away the whole of the coffins they threw any remains into that drain?—It was open when I first attended, and the commissioners compelled Mr. Howse to build this arch over it.

Mr. *Samuel Pitts.*

17 March 1842.

156. Previous to that being built was it possible anything could go into the sewer?—Previous to that, I believe, it was open; or covered over with building.

157. When the wood was taken away, could anything fall into the sewer?—Yes.

158. To the best of your belief, did anything fall in?—I cannot say, but I believe it to be possible; if it had been secure, why should the commissioners compel him to build an arch over?

159. Were any of the bodies deposited in leaden coffins?—Not one, that I know of.

160. Mr. *Kemble.*] Do you know whether they objected to their being in leaden coffins, or not?—I do not.

161. You say you have observed a black fly; does this arise from the putrefaction of the bodies?—I expect that.

162. Had you always that black fly, or was there any other description of insect previous?—Not in my time; I understand that, at the first, when they appeared, it was a different sort of insect; but that was previous to my attending there; during the time I attended there it was a small insect, similar to a bug.

163. Is Enon Chapel a place surrounded by houses?—Entirely, except on one side, which is open to Clement's Inn.

164. Lord *Mahon.*] Have you any reason to believe that the abduction of coffins has proceeded to any great extent?—Yes, I have.

165. Have they been removed by night?—I do not know at what time they were removed; but I understood it was a regular thing for them to burn the coffins in their own house, which was adjoining the chapel.

166. That they burnt the wood of the coffins in the house of the minister?—Yes.

167. Mr. *Ainsworth.*] Had he the sole management of the chapel?—Yes, he built it.

168. *Chairman.*] As a speculation?—Yes.

169. Lord *Mahon.*] What is its present condition?—I believe the chapel is shut up.

170. *Chairman.*] Was it shut up in consequence of the smell of the place?—I suppose so, that they could get no person to take it; it is now in the possession of the widow, and her son, young Mr. Howse.

171. Are there any interments there now?—I cannot tell.

172. Have you ever, yourself, attended a burial in that chapel?—Yes.

173. Was there a trap-door to let down the coffins?—Yes, there is an entrance with steps attached; and there is another within, by a trap-door, out of the chapel; that is the way in which, I believe, large coffins were carried down; smaller ones were carried down the steps from the court.

174. Was the smell more offensive when that trap-door was open than when it was not open?—Yes, the smell was very offensive; enough, as it is said, to knock you down.

175. Do you think that the deposit of those bodies originated effluvia injurious to the neighbourhood?—I can have no doubt about that.

176. Is it true that this dissenting minister had a Sunday-school for children?—He had at that time.

177. Did they meet in the chapel?—Yes.

178. How long were they there?—They were there from nine in the morning till service began, at eleven; then during the whole of the service in the morning, and in the afternoon from two to four, or thereabouts.

179. How many hours would that make in the day?—About six hours.

180. So that those young children were kept six hours in this chapel and school over 12,000 dead bodies?—Yes.

181. Mr. *Kemble.*] Do you know how many children attended?—They varied; I have seen as many as 50 there.

182. Lord *Mahon.*] They did not return there any days in the week but Sundays?—No.

183. Mr. *Ainsworth.*] Was the chapel made use of in the week days?—No, I believe not, except on two evenings in the week.

184. Have you any remark to make regarding the health of the children who attended?—I know nothing about the health of the children; I had nothing to do with the school; I can say this from my own wife, she has not been a healthy

woman since she attended there; she used frequently to come home ill, and was obliged ultimately almost to desist from going on that account.

185. You cannot state to the Committee the state of health in the immediate neighbourhood?—I cannot.

186. Is it your opinion that it must be affected by this cemetery?—I think it must; it is an exceedingly close neighbourhood.

187. In how many years do you suppose those 12,000 bodies have been deposited, or how long is it since this chapel was opened?—It was first built, I believe, in the year 1823.

188. Were the vaults formed at the same time?—Yes.

189. It was made a speculation by the minister?—Yes.

190. In that period of time 12,000 human corpses have been buried?—Yes; it has been going on from that time to the last year or two.

191. Are all the persons of the Baptist persuasion in that neighbourhood buried there?—No; but it was so cheap, that the poorer classes in the neighbourhood, not, perhaps, religious persons, were buried there.

192. You account for the vast number of persons buried there from the cheapness of the fee?—Yes.

193. This gentleman, though a Dissenter, took in other persons to be buried there?—Yes; my wife remonstrated with Mr. Howse when she heard the report of the burning of the coffins; we buried a little boy there, and he said she need not make herself at all apprehensive about it, she might at any time see the corpse; in fact, it was at first put in a kind of private vault, a little stone place built, I believe, chiefly for his own children; I had at the time an impression that I should remove it to my own family grave in Bunhill-fields, but it has never been done; when she remonstrated with him about it, he said she might at any time see it after it had been buried a twelvemonth; that he had no objection to any person seeing coffins opened after the first twelvemonth, but he thought during the first twelvemonth it was not proper; but there would have been no possibility in nine cases out of ten of getting at the coffins or finding them at all, in consequence of the number placed there.

194. Mr. *Kemble.*] Do you attribute the death of the child in any way to attending this chapel?—I cannot state that; the child died from water on the brain.

195. Have you other children?—I have.

196. Do you find that the health of the other children is affected by it?—I have one child very much affected with scrofula.

197. Mr. *Ainsworth.*] What are the accustomed fees at this burying-place; what did you pay for your own child?—The child was about five years of age, and I paid, I think, 8*s.*; from 12*s.* to 15*s.*, I think, were paid for a grown person.

198. What did that include?—That included every thing; the ground, and the minister of course did not expect anything; that is paid to him.

199. You are quite certain you have smelt yourself in this chapel the effluvium arising from those dead bodies?—Hundreds of times.

200. This is in a very densely populated neighbourhood?—The houses are close upon it.

201. Can you account for 12,000 bodies being placed there, except that the coffins must have been destroyed for the purpose of giving more room?—No, I cannot, for I do not think the space would hold them.

202. If this minister had not burnt the coffins he could not have had room to put in that number of bodies?—I think he could not.

203. Therefore there was a necessity for destroying the coffins?—Yes; I did not believe that he did so at the time, but I have every reason to believe so since his death.

204. If you had believed that at the time, you would not have allowed your child to be buried there?—I should not, nor should I have continued to attend the place.

205. Mr. *Kemble.*] You stated that persons, even in winter, were taken home fainting; did that often occur?—Yes, often; perhaps on an average every other Sunday.

206. One or more persons in a day?—Yes; there might be occasionally a Sunday pass without it, but that was, I think, the average.

Mr. *Moses Solomons*, called in; and Examined.

Mr. *M. Solomons.*

17 March 1842.

207. WHAT is your occupation?—In a general line of business.

208. Where do you reside?—I reside No. 6, Vinegar-yard, Drury-lane.

209. How long have you resided there?—Fifty-seven years.

210. Are you connected in any way, directly or indirectly, with the cemeteries about this town?—Not at all.

211. You have no interest whatever in them?—No.

212. How is your house situated with regard to the burial-ground in that street?—My house is extremely narrow; our back staircase windows look into the churchyard.

213. State to the Committee what has occurred to your observation from being so near the churchyard?—I have seen the gravedigger take a coffin out, that coffin not being quite decayed, and take the body out, and he has taken the spade and chopped the head from the body so that he could take it out of the grave.

214. In what churchyard is this?—It belongs to the New Church in the Strand, St. Mary's.

215. Are the graves dug deep, or how are they dug?—They are sometimes twelve or fourteen feet deep, up to twenty sometimes; then they put in perhaps six or eight coffins, till it comes almost to the surface.

216. To within what distance of the surface?—I suppose three or four feet.

217. Is this the general practice in this churchyard?—Yes.

218. Does any exhalation or putrid smell arise from it?—Sometimes, in summer-time.

219. Is that very great?—Yes, very great.

220. Have you ever found it affect your health?—No.

221. Nor the health of your family?—No.

222. How long has this place been made use of as a graveyard?—I remember it ever since I have lived in the neighbourhood, fifty-seven years.

223. Mr. *Ainsworth.*] Where is this burial-ground?—It is in Vinegar-yard; the gate goes from Russell-court, Drury-lane.

224. How far is it from the St. Martin's burial-ground?—I suppose about five or six minutes' walk.

225. *Chairman.*] Have you ever experienced any unpleasant smell arising?—In the summer.

226. Has that ever been so strong as to oblige you to close your windows?—Yes, at times.

227. Is it very offensive?—Not so much as in other places; it is a very small ground.

228. What is the size of it?—I suppose better than half an acre.

229. How many bodies are placed there?—I have seen three or four on a Sunday; I have seen three burials very lately in it.

230. What would you take the average at in the course of a year?—I dare say we might reckon from six to seven a week.

231. About one a day?—Yes.

232. How many years has it been opened?—I cannot tell; I can remember it ever since I have been in the neighbourhood.

233. Are you aware that that would make 20,000 bodies in half an acre of ground?—Yes.

234. Are you of opinion that there are 20,000 bodies in that space?—Yes; there are three or four buried in a day sometimes.

235. At the lowest computation, you think there are 20,000 human bodies placed in that ground?—I have not the least doubt of it.

236. Lord *Mahon.*] Have you reason to believe that any large number of coffins are abstracted?—I have seen a great many broken up.

237. What persons have broken them up?—The grave-digger.

238. What does he do with them?—I suppose he puts them in the bone-house, and the bones too.

239. What does he do with the coffins?—I suppose they sell them, and take the nails out.

240. Have you reason to believe that practice prevails to a great extent?—No, I cannot say that it does, but I have seen him break them up.

Mr. *M. Solomons.*

17 March 1842.

241. In that churchyard?—Yes.

242. Have you seen him break them up more than once?—Yes.

243. Is that done with secrecy?—It is done so that anybody can see it out of the back windows.

244. *Chairman.*] It can be seen only by those who have windows looking into the churchyard?—Yes, from their back windows.

245. Lord *Mahon.*] Have you known those broken-up coffins to be burnt as firewood?—I suppose it is done, but they have been taken away.

246. Your impression is that they have been taken away to be burnt?—Yes.

247. *Chairman.*] Is that a healthy neighbourhood?—Where I live is very healthy, because I live opposite to the theatre; Russell-court is much narrower.

248. You attribute your being more healthy than your neighbours to being in a more healthy space?—Yes.

249. Mr. *Ainsworth.*] Is this considered a parochial burial-ground belonging to St. Mary's parish?—Yes.

250. Who has the superintendence and care of the ground?—I cannot say; I have seen the churchwardens there.

251. What is the fee for burial in that churchyard?—That I cannot say; at the time the cholera morbus was about, the gravedigger would put two or three into one grave; he was taken very ill, and I believe he died two days afterwards; his name was Jackson.

252. *Chairman.*] Had you any very severe cases of cholera in your immediate neighbourhood?—A son of mine died with it.

253. You were not acquainted sufficiently with the other houses to inform the Committee particularly?—No.

254. Lord *Mahon.*] Do your house windows look on to this churchyard?—Yes, the back of my house was near the bone-house.

255. Did your son's room look into the churchyard?—No we have no windows from our rooms into this yard; we have a staircase window from which I could see what was passing in the ground.

256. Mr. *Ainsworth.*] You do not know what is the expense of interment in this ground?—I do not.

Mr. *William Burn*, called in; and Examined.

Mr. *Wm. Burn.*

257. *Chairman.*] WHAT situation are you in?—A master carman.

258. Where do you reside?—I reside in King's Head-yard, Duke-street, Lincoln's Inn-Fields.

259. Are you in any way connected with cemeteries?—Not in any way whatever.

260. Will you have the kindness to state anything which comes under your knowledge with regard to interments in the precincts of this town?—With regard to Enon Chapel, at the time of the sewer being built, I was employed to remove with my carts the rubbish which was dug up, and I think, to the best of my recollection, I took about 60 loads away from the place.

261. Of what?—Of rubbish, earth, and whatever it consisted of; I think I received 7*l.* 15*s.*, at 2*s.* 6*d.* per load. In the alteration of the sewer, they were obliged to dig deeper and wider to enlarge; there was a sewer there, but it was obliged to be enlarged.

262. It was a barrel sewer?—Yes.

263. Were there any human bodies removed?—There were a great many bones taken out of the vault; the whole came out of the vault.

264. Mr. *Ainsworth.*] Where did you remove them to?—We used to shoot our rubbish then near Waterloo-bridge, where they were making a pathway opposite the pathway in the Waterloo-road, and in the back streets.

265. *Chairman.*] You filled up the streets with this rubbish, consisting of bones?—Yes.

266. Mr. *Ainsworth.*] By whose permission did you do this?—The place was open for the depositing of rubbish to raise the causeway in forming the new streets on the right.

267. Mr. *Kemble.*] You were employed by the minister of the chapel?—I was employed by the bricklayer who had the job; he paid me.

Mr. Wm. Burn.

17 March 1842.

268. *Chairman.*] Was the whole of this vault under Enon Chapel entirely cleared out?—No, there was a space; I do not know how they got it out, for the coffins were piled up as high as the floor on one side, just to get a space to take them out. There were some curtains of canvass drawn to hide them from the gaze of the workmen that were there. They told me that the person that was then employed as sexton or gravedigger was a very drunken sort of man; he did not mind, if a coffin came in his way, putting his pickaxe through it, any more than putting it into the earth. I did the whole of it with my own hands; I used to execute the work myself. There were some men repairing Clement's-lane; they asked me to give them a few baskets of rubbish, which I did, and they picked up a human hand, and were looking at it, and there were crowds collected; it did not appear to have been buried probably a month; it was as perfect as my hand. The sexton, when he found there was likely to be a piece of work, ran out and snatched it away, and blew me up for letting them have it. I told him I did not think I was doing any mischief in giving a basket of rubbish to the men. When I was shooting out the rubbish, I recollect some gentlemen looking at the bones; I believe some of them were medical men, and they asked me where I got them from. The subject was most repulsive to me; I never saw such a sight with coffins broken about.

269. What is the depth of this vault from the flooring of the chapel to the bottom?—I should suppose, from what is called the bottom, not more than two yards.

270. How was it possible for it to hold so many coffins?—I took, I suppose, 60 loads at 2*s.* 6*d.* a load; the amount I took away making 7*l.* 15*s.* or 7*l.* 17*s.* 6*d.*, so that that must have been in the place.

271. Those consisted partly of earth, partly of human bones, and partly of coffins?—Yes; I have had some practice in other places. There is a peculiarity in earth out of a burying-place which I can describe best by a "nauseous smell," for I have been taken ill myself lately by removing this sort of earth, a sort of clammy earth. There is something very offensive both to the smell and the feel, and it makes one feel ill at the stomach. A great portion of this earth was of that description. I have no doubt that the greatest portion of what I removed was human bodies in a state of putrefaction.

272. Mr. *Ainsworth.*] Did you make no remark about it to the minister?—It was not my business.

273. What was the minister's name?—His name was Howse. I was only employed as a labourer, as I may say; I got paid for what I did. The bricklayer who employed me was Griffiths; he lives in Crown-court.

274. *Chairman.*] How long were you about this job?—Several days. It was a very near shoot; I went over Waterloo bridge, and paid the toll out of what I got, because I could do so many more loads; I did six or seven loads in a day.

275. How many persons do you suppose have been buried under this chapel within your knowledge?—I really cannot say with regard to the number; I had been in the chapel at funerals previously to this job; I heard what Mr. Pitts said with regard to the quantity, and I believe what he said to be correct, though I cannot account for the disappearance; I know it cannot hold the amount buried, but I know on the Sunday the lane was crowded with funerals; it was so remarked that they were continually burying; they buried cheaply; there are plenty die in Clement's-lane.

276. Mr. *Ainsworth.*] How many do you think have been buried there in a week?—I cannot say; I have had nothing to do with undertaking.

277. *Chairman.*] The substance of how many bodies do you suppose you may have removed in that earth?—I cannot say. I cannot see how the quantity of real earth could come out of that little place, a yard and a half wide and a yard deep; and there was a sewer there of a certain description before, so that it was not entirely like digging for a fresh one.

278. Could any substance in those vaults fall into the sewer?—I cannot say that, but I have heard very strong hints that they made use of it for that purpose before, and that that was the reason the sewer people superintended the concern during the alteration. I have heard Mr. Pitts, who is a member of that church, say that the sewer company put Mr. Howse to the very extent of what the law would allow them to do to make the thing perfect.

279. So afraid were they of bodies being slipped down that sewer?—I believe that

that was the impression of the neighbourhood, that it was made use of for that purpose.

280. Is it your belief that bodies were slipped down that sewer previously?—I have no doubt of it whatever.

281. You think the reason why the persons superintending the drains were so strict was, that they apprehended there had been the habit of slipping decomposed bodies down the sewer?—That is my impression.

282. Your impression is, that considering the number of bodies interred there, unless something of that kind had occurred, it could not have held them?—It could not.

283. Mr. *Ainsworth.*] Have you heard the evidence of Mr. Pitts?—I have.

284. Do you believe the statement he has made of there being nine or 10 interments on a Sunday afternoon to be correct?—I think that is under the mark; I should say 20 in a week.

285. *Chairman.*] When the soil was mixed up with the putrefaction of those removed by you, and the sewer was closed, that gave a good deal of space to put in more coffins?—I am not aware of that.

286. When you had done your work, for how many coffins was there space left?—The place appeared to me to be full, with the exception of that they cleared away to do this, and to be built up to the very ceiling.

287. And yet they continued to bury there?—Yes; they continued to bury there for years after that.

288. How could they dispose of the fresh coffins?—That I cannot say.

289. You, as a working man, had cleared away this mould; you say, they piled up the coffins on the other side, but that when the coffins were replaced there was no space left under the chapel, and yet you say they continued to bury there at the rate of 20 in a week?—Yes.

290. What do you suppose was done with the coffins or the bodies?—I do not know from my own knowledge, for I had no connexion with the place; I never used that as a place of worship, but I know, with regard to the neighbourhood, every house in the place.

291. Do you consider that a very healthy neighbourhood?—I consider it the most stinking, unhealthy place probably near London; I had an instance of it last week: I removed a wretched family into this place in St. Clement's, near the piece of ground which attaches to King's College Hospital; coming up to St. Clement's-lane, there is a piece of ground where the wet oozes into the kitchens and cellars, and the windows look over this burying-ground; the parlour windows are pretty nearly level with the ground; the woman had occasion to call at my place, and she said that she was so ill she did not know what to do; there was a peculiar smell; she thought it was from the blacksmith's shop underneath; my wife said, "You do not where you have come to; poor thing, you will be soon carried away if you remain there." I have particular friends that have lived there; it is one of the most filthy places which can be found anywhere: here is Enon burying ground on one side, and this spot in Portugal-street on the other, and the stinking market in the centre.

292. You have no doubt the unhealthiness of that place arises from that burial-ground?—I have no doubt of it.

293. Colonel *Acton.*] You do not think that it arises partly from the market?—No, it is the bad, confined, close drainage of the houses.

294. Mr. *Ainsworth.*] Who takes care of the paving and lighting of that part of the town?—It is in St. Clement Danes; but it is a fact with the back streets, hat the Board do not pay much attention to those poor neighbourhoods.

295. Mr. *Kemble.*] Is not there a third burial-ground in this lane, at the bottom of it?—I am not aware of any other; I had a job a few months back with the Savoy burial-ground; I had several loads to take away of this description of earth; that is a very small burying-ground, but I look upon it as the same sort; I was taken very ill with sickness at the stomach from the smell; that was the description of feeling I wish to describe as applying to the other case.

296. You felt the same symptoms?—I did.

297. Have you any doubt that it arose from the same cause?—No, I have not; I do all sorts of work, sometimes night-emptying, and that is beautiful in comparison to this.

298. Mr. *Ainsworth.*] Have you been called upon to remove rubbish from

Mr. *Wm. Burn.*

17 March 1842.

other burying-grounds?—Yes, I have, from St. Mary's, in the Strand, and St. Clement's; they are more careful of the bones, but there is the same smell.

299. There is the same system of removing as in other burying-grounds?—There is.

300. *Chairman.*] Have you yourself been in Enon Chapel during service?—I have not; I have been in in one instance while they performed the service over a person who was buried.

301. Did you find it unpleasant at that time?—I did not observe it at the time.

302. You have no doubt that the state of the atmosphere is such, the observation applies to that place?—Yes, I have no doubt that three times the number die in that street to what die in any other part of the parish.

303. There are none buried in leaden coffins?—No; a family who could buy a leaden coffin would never bury there.

304. How long were you before you recovered from the feeling you have described?—I suppose it was three days before I recovered my feeling and smell.

305. Did your spirits suffer at all?—No.

306. It has been remarked to-day that this effluvium produces a desire for ardent spirits?—I have never felt it operate in that way. There is a Baptist chapel near to where I am, in Little Wild-street, Lincoln's-Inn-fields, close behind my house; they are more select in burying there, but there is a bad smell there; the people cannot bear it in the summer time; I suppose the living of the minister there is chiefly from the burials, only they cement them; they brick them round, and put a little cement over. The burials there are more respectable, but the chapel is very unhealthy.

307. Do you think that spreads to the neighbourhood?—Yes, I have no doubt of it; but, by the cement, it is kept more in the building.

308. What is the size of this chapel?—It is something larger than Enon Chapel.

309. Is the depth of the vault the same?—No; I think the depth of the vault is greater than the other; I should say it is a more respectable place altogether; there is a ceiling; but after all, the smell, and especially in summer time, overcomes the people, and there is nothing thrives there at all. It is a very poor congregation, and it always will be.

310. Are the fees very low in that chapel?—No; what makes me think they are not so low is, that there are a great many funerals with hearses, so that I think it is of a more respectable grade.

311. You are not aware what number of persons have been buried there?—No.

312. Suppose the burials were to cease altogether, do you think that would benefit the neighbourhood?—I should say it would, and it would rob the clergyman of all he gets, for his living depends principally on what he gets from the burials.

313. Is he a Baptist minister?—Yes, he is.

314. Mr. *Ainsworth.*] You say you have occasionally removed earth from other burial-grounds; do you know the burial-ground in Drury-lane, attached to St. Martin's-in-the-Fields?—I do.

315. Have you been employed to take away earth from that ground?—I have not; I have done jobs about that once, but not in taking away earth.

316. *Chairman.*] In your opinion, is the burying in both Enon Chapel and this chapel in Wild-street, injurious to the health of the neighbourhood?—That is my opinion, and has been for some years.

317. Mr. *Kemble.*] Do you think that the existence of those burying-places occasions an increased drinking of spirits among the lower orders?—I cannot speak to that; but more generally, the poor people when they are poorly, run to gin for a remedy.

318. Is Enon Chapel open now?—I cannot speak to that; the teetotallers have had it for some time for lectures.

319. Do you know whether funerals take place there now?—I cannot say.

320. Do you know what the ground-rent paid for Enon Chapel is?—No, I do not.

Mr. *John Irwin*, called in; and further Examined.

Mr. *John Irwin*.

17 March 1842.

321. *Chairman.*] IS there another burial-ground in Clement's-lane, besides those which you referred to in your evidence?—Yes, at the bottom of Clement's-lane, on the right-hand side, about 150 yards from Enon Chapel.

322. To whom does that belong?—To the parish of St. Clement Danes.

John Eyles, called in; and Examined.

John Eyles.

323. *Chairman.*] WHAT situation are you in?—I am a Bricklayer and Plasterer by trade.

324. Do you ever attend churchyards?—I do not now; I have worked at them a little while.

325. At what did you work?—I took the place of grave-digger.

326. For what grave-yard?—St. Clement's churchyard, in Portugal-street.

327. How long have you done that work?—About a twelvemonth, or a little more.

328. How long ago?—About two years ago.

329. What was your duty there?—To see that the work was done properly; shoring-up, and such as that.

330. Not to work at the grave?—I did sometimes work at it when there was an occasion for it.

331. Did anything come under your observation as to putting in the bodies; were they put in tolerably well?—Yes, they were put tolerably well, as far as I saw.

332. Did you see any coffins broken open?—No, not improperly; where the coffins were decayed, and the coffins were rotten, then they have not wanted breaking.

333. Have you cut through them?—No, they did not want any cutting where they were decayed.

334. What did you do with them?—They came up with the ground.

335. What was the depth they put the coffins?—At different depths.

336. What was the deepest?—Twenty feet deep; five feet was the common depth.

337. You never put them up higher than five feet?—Yes, the grave was five feet before the coffin was put in; they would put 12 or 14 coffins in a deep grave.

338. Suppose a grave five feet deep, how many would it hold?—That would hold one grown person and three children.

339. Within what space of the surface would that come?—Within two feet six; that was the regular depth.

340. What is the size of the churchyard?—I have never measured it.

341. Is it half an acre?—No, I think not.

342. A quarter of an acre?—I dare say it is.

343. About one-third of an acre?—I cannot say without measuring it; it is a good size.

344. How many are there buried there in the course of a week?—Sometimes only one, sometimes seven or eight; sometimes we have not buried one in the course of the week.

345. Is it for the whole parish?—It is for anybody who likes to bury there.

346. Is there any unpleasant smell in the church-yard?—In the summer there may be, but it is not anything to speak of.

347. Mr. *Ainsworth.*] Do you know anything as to the amount of the fees?—14 *s.* 8 *d.* for a poor grown-up person, and I believe 8 *s.* 2 *d.* or 8 *s.* 4 *d.* for a child.

348. Were you, during the time you were employed to superintend the operations of that yard, ever unwell?—I was a little at one time, not anything to speak of.

349. What was the matter with you?—I had a little ailing, but not any great deal.

350. What was the nature of it?—I felt a little sick.

351. Since that you have been well?—I am not thorough well now; but sometimes better.

John Eyles.

17 March 1842.

352. Were you obliged to take any spirits when you were connected with that yard?—I am always fond of that.

353. What age are you?—Twenty-five.

354. How many gravediggers are there in that yard?—There are two now.

355. Are they men in good health?—Yes.

356. What wages do they get?—It is according to what they do; it is all piece-work, so much a grave.

357. Are those men fond of a little drop now and then?—You can hardly find a man of that sort who is not fond of it.

358. Mr. *Kemble.*] Do you know whether any of those coffins are taken and put into the bone-house?—I do not know; I have not been in the ground a long while.

359. When you were in the ground, was that done?—There are little bits come up sometimes.

360. Mr. *Beckett.*] But nothing in the shape of a coffin?—No.

361. Mr. *Kemble.*] Do you know of those pieces of wood being used as fire-wood?—Yes, I did at that time give a poor woman some; and I have burnt it myself.

362. Mr. *Beckett.*] Have you ever found the wood come up in the shape of a coffin, or a coffin lid, or a coffin side?—There are pieces of coffin which will decay, but the body will decay; in some parts of the ground coffins will hold twice the time of the body; I have seen some coffins upwards of 100 years old, which were as sound as when they were put in.

363. *Chairman.*] You say you have felt unwell when you were there?—Some times I did, and sometimes I was better.

364. Have you ever known a coffin buried so shallow as to be near the surface of the ground?—I have not known of that in my time.

365. You say you have seen parts of coffins, but not entire coffins, taken up; were there any cut through in digging?—Sometimes; if they are decayed or soft, they must be.

366. When you were digging there, do you mean to say that you do not throw up the wood of three or four coffins every time?—If they have been rotten, and in the way, they have been thrown up; if they have been of no use at all.

367. You could not throw up the coffins without throwing up bones?—Where do you see a grave-yard where there are not bones thrown up? The flesh leaves the bones, and there is a bone-house to keep those bones together; there is a large hole twelve or fourteen feet square, a piece of ground rather full, and the bones are put in there.

368. And the coffins burnt?—The coffins have decayed.

369. Have you given them to persons to burn?—Yes, I gave some to a poor woman once.

370. As this is a small churchyard, and so many persons have been buried there, is it possible, suppose you were to go there and dig a grave, to dig that grave six feet deep without interfering with bodies previously buried?—We must try for it; there is a searcher to bore into the ground and see; we must do the best we can; some persons will want a particular part of the ground, then they must have it whether shallow or deep.

371. Mr. *Kemble.*] Do you know how long coffins are there before they decay?—I have seen some that have been in the ground 100 years pretty nearly as good as when first put in, and others have perished in a much shorter time.

372. Was the bone-house removed while you were there?—No; there is one where the watch-house was.

373. Have you assisted in taking bones from one part of the ground to another?—Yes.

374. What portion of time did that occupy?—Three days.

375. How many were employed?—Three or four of us.

376. Did you remove them in baskets?—Yes.

377. Do you know the number of baskets you took away?—No; we did not keep an account of the number of baskets; if we had been paid by the basket, we should have done so; we put them so that they might not be disturbed again for 200 or 300 years.

378. *Chairman.*] You have no idea how long that churchyard has been used as a grave-yard?—No.

John Eyles.

17 March 1842.

379. Could you point out any spot in that yard where you could dig down without coming to a coffin?—Yes, I could.

380. Is it a fact that you ever took out of coffins the bodies of children?—No.

381. Have you never taken any bodies home?—I have had enough to do to take myself home.

382. Will you answer the question?—I never did.

383. Did you never open the coffins of children?—No.

384. Have you ever taken any part of a human body of any sort or kind?—No.

385. Have you ever broken open any coffins?—By accident I might; thin coffins.

386. When you have done that, have you ever taken any of the remains out?—No, not any.

387. Have you ever said that you did?—No.

388. What was the depth of the coffin of Thomas Beale, a child?—I suppose, if it was put at the top, it would be about two feet six inches from the surface.

389. Was that ever taken up?—Not that I know of. When I was away I could not answer for what my men did.

390. Do you remember the place where Mr. Dorrell planted trees there?—I remember there were trees being planted there.

391. What occurred on that occasion?—I do not know; it was not in my time.

392. Do you remember a man of the name of Irwin taking the measure from the surface of the coffin in any grave?—Yes, I remember he came in there; there are places where old wood is put in, where I could go blindfolded to the place and take a knife and feel the wood almost myself. I do not know whether it may be a coffin or other wood he felt; there is wood buried all over the ground; there may be a still-born child; sometimes there is not time to dig a hole there, and we just dig a hole to get it out of sight, then when a grave is opened, if we think of it, we put that child down in the grave, in its deal box, about half an inch thick; that box will last longer than the child.

393. Did you never put any coffins within two feet of the surface of the ground?—Not in my time.

394. Have you never been asked to do so by the sexton?—That depends upon the wish of the person who orders it. If they come and ask, "Are you going to open a grave?" and they wish to pick it out in such a spot, they will say, "It does not matter to me whether it is quite the depth of a grave." I dig the grave according to my orders, and the corpse is put in.

Veneris, 18° *die Martii*, 1842.

MEMBERS PRESENT.

Colonel Acton.	Mr. Beckett.
Mr. Ainsworth.	Colonel Fox.
Lord Ashley.	Mr. Kemble.

W. A. MACKINNON, Esq. in the Chair.

Mr. *George Whittaker*, called in; and Examined.

Mr. George Whittaker.

18 March 1842.

395. *Chairman.*] WHAT is your station in life?—An Undertaker.

396. How long have you been in that business?—I have followed that business for about 16 years.

397. Have you any interest in the cemeteries which have been established about this town?—None whatever.

398. You are not connected with them?—Not at all.

399. As an undertaker, you know something about the different burial-places with which you are connected; will you state to the Committee what you know about

Mr. *George Whittaker.*

18 March 1842.

about them?—They are all in a very dreadful state; they are exceedingly full, and the scenes which I have met with in them would shock any person.

400. Just specify to what scenes you allude?—I have seen coffins broken in the graves, and shovelled away to make room for fresh comers.

401. And the bodies cut to pieces?—Decidedly so.

402. How do you mean?—Cut with the spade.

403. Were those very old coffins, or had they been placed in the grave only a short time?—I have seen both old and nearly new coffins destroyed.

404. To make room in the grave-yard?—In the places where funerals were to take place.

405. Has this often occurred?—Yes, it is a case of almost every-day occurrence.

406. To what grave-yards are you particularly alluding?—The one I particularly allude to, is that of Enon Chapel.

407. You mean the vault under Enon Chapel?—Yes; it is more like a cellar.

408. Have the kindness to describe to the Committee the state of that vault?—It is dreadfully full. On one occasion when I went there, a covered coffin was brought up to the surface; the body seemed as though it had been scarcely buried a week; the hair was on the head; the flesh was fresh, and the inside of the coffin was strewed with quick lime apparently; it looked like white dust.

409. Colonel *Acton.*] When was that?—Some time ago.

410. Can you mention the year?—It is within these two years.

411. *Chairman.*] It has been stated by a former witness that 12,000 people were buried there in a space not above 59 feet by 29 feet; do you confirm that evidence, or do you dispute it?—I should consider that there had been fully that amount.

412. How do you account for so many bodies being placed in so small a space?—I cannot account for it.

413. Did you find an effluvia, or unpleasant smell arising from it?—Very much so; it has affected my health very materially indeed.

414. Colonel *Fox.*] Is it part of your business to attend every funeral that you undertake?—It is my business and my duty to do so.

415. *Chairman.*] You say the effluvia arising from it has affected your health?—Yes.

416. In that and other places as well, I suppose?—Yes.

417. Do you consider the stench arising from this mass of putridity to be very unwholesome?—I am certain of it.

418. Do you consider that it affects the neighbouring houses, as well as the parties who go there?—I should consider it did, particularly from the vaults.

419. Colonel *Fox.*] Do you know that it does?—From my own health I should say so; it has affected me very seriously, and has laid me on a bed of sickness.

420. How many funerals do you generally attend in the course of a day or a week?—I have gone to two or three in the course of one day.

421. Colonel *Acton.*] When was the last funeral at this chapel?—That I cannot tell you; the time that I attended there is not in my memory.

422. Perhaps you can state somewhere within a period of six months; I mean, is the place given up now as a burial-ground?—It is locked up.

423. There are no burials there?—There are no burials there now; but I believe the place is left in the same dreadful state in which I saw it.

424. *Chairman.*] What is the practice employed in walking funerals?—There are men underneath; the pall covers them, and they convey the body to the ground.

425. Is not that likely to be unhealthy to the men who convey the bodies?—Yes; I have been affected very much myself by a walking funeral before now.

426. Is not the gaseous matter that escapes from the coffin, being shut up under the pall, likely to affect the coffin-bearers?—Yes, particularly the men at the shoulders; they are closely covered by the pall, consequently they inhale more of it than the men at the feet.

427. Have you found that affect their health?—It has affected mine.

428. Colonel *Fox.*] In what way has your health been affected; what have been the symptoms?—I have lost my appetite, in the first place, with severe sickness; I have not been able to follow my work. In some cases, where I endeavoured to get some gas at one time from one of the vaults, I was laid up then for a week, or nearly a fortnight, and was not able to follow my business.

429. Did you consult any medical man on that subject?—I consulted Mr. Walker.

430. Did the medical gentleman that attended you attribute your complaint to that occupation?—Yes; and I am certain it was that.

431. *Chairman.*] According to your impression, is that gas exhaling also injurious to the houses in the vicinity of the grave-yard?—I should certainly think so.

432. You judge so from the effect which it has had on yourself?—I do.

433. Colonel *Acton.*] Were you employed to collect the gas?—Yes, I was requested by Dr. Walker to do so. Having named it to him, he said he should like, if possible, to have some of this gas obtained. I offered my services, and I went to get it; I had to go very many times, and at last succeeded in getting one India-rubber bottle full of this gas; and I believe it contained four of the most deadly gases that can be produced.

434. *Chairman.*] How did you proceed to get those gases?—I got them from the vaults under the church; I took an instrument, with which I bored a hole from the outside through the lid of a leaden coffin.

435. Then did you apply the India-rubber bottle to it?—Yes; and by that means the bottle was filled, which I gave to Dr. Walker.

436. Did any of the gas escape, so as to injure you?—Yes; I tried also at another time, and in another vessel, and I was very nearly killed.

437. By this gas?—Yes. According to the date on the coffin, the body had laid there eight years. I was at the top of a pile of coffins, and had I not jumped down, I am certain I could not have lived.

438. Colonel *Fox.*] After you had bored the hole?—Yes; it was so powerful, that I had not time to get the instrument into the coffin.

439. *Chairman.*] What were the effects on your feelings at first, and upon your health afterwards?—My limbs seemed to fail me. A medical man, who was with me at the time, was also affected, and stumbled and fell; but he received nothing of it compared to me.

440. Then, from your experience, you are satisfied that the gas which is exhaled from the coffin is of the most deadly quality?—It is.

441. At what distance would you say that that gas affects the health?—I cannot pretend to answer that question.

442. But as to the fact, you know it from your own experience?—I do.

443. Is this chapel entirely surrounded by houses?—It is, and in a very dense neighbourhood.

444. Colonel *Fox.*] Where is Enon Chapel?—Clement's-lane.

444*. *Chairman.*] You stated that Enon Chapel is surrounded by houses on every side, and that the gas arising from these 12,000 bodies must therefore be spread in the atmosphere, and get into those houses?—Yes.

445. Can you state to the Committee by what possible means so large a number of bodies could be placed in so small a space?—I can only state that it must have been from removal; and of course the lowness of the expense of burying there induces people to go.

445*. Is it shut up now, in consequence of the death of the dissenting minister?—It is shut up, but in consequence of what I cannot say exactly.

446. Mr. *Ainsworth.*] Are you aware what the fees were at that burial-ground?—I think about 12*s.* for a grown person.

447. *Chairman.*] You speak, therefore, entirely in what you say from your own knowledge?—Yes.

448. You stated that when you took this gas out for the medical gentleman who employed you, you found yourself struck down in the way you stated?—I did.

449. Is it your opinion, that in every coffin gas is generated in the same manner?—Yes.

450. You have no doubt of it?—No doubt of it at all; but it depends on circumstances, in a great measure, whether it could be obtained from the coffin. If the plumber solders the inside lid round perfectly, and leaves no hole, you can obtain it; but if he leaves any vacant space whatever, as it forms it mixes itself with the atmospheric air.

451. The intensity of the gas is in proportion to the time it is confined?—It is so powerful that it will raise all the lids together, and burst them.

Mr. *George Whittaker.*

18 March 1842.

452. Then you mean to say that the gas generated in leaden coffins must, sooner or later, escape in the atmosphere?—Yes.

453. Then a leaden coffin is no security against the evil effects of the gas?—Not the slightest. I have made a little inquiry among some of the grave-diggers, and I have been informed by one or two that they are in the habit of burning the gases. When they observe the upper lid of the coffin getting convex, they make a hole, and put a pipe in, and set it alight; and I have been informed that it will burn for 20 minutes.

454. Colonel *Acton.*] Do you mean to say that that takes place in a lead coffin?—Yes.

455. Do you mean to say that if that were not done the coffin itself would burst?—The gas would escape into the vault.

456. Would the lead crack?—It would force an open space in the lead, so that the gas would escape into the air; but it would not appear that the coffin had bursted to a casual looker-on. It does not make a rent in it; it merely requires a small space.

457. *Chairman.*] Then, in every point of view, the escape of the gas must be injurious to the health of the people in the houses in the neighbourhood?—I should say so.

458. Has there not been a grave-yard opened as a private speculation by Messrs. Hoole & Martin, in the New Kent Road?—It is still in existence.

459. Will you state to the Committee what you know about that?—I should say there were at the present moment from 1,600 to, perhaps, 2,000 bodies under there. They are above ground, piled one above the other; and I do not think there are a dozen of them in lead at all.

459*. Colonel *Acton.*] How do you mean, when you say they are above ground?—In the vaults, they are placed one above the other.

460. They are in the vaults?—Yes. They are open every Sunday afternoon; so that any person having friends buried there can go in.

461. Is it consecrated ground?—Yes.

462. Is it a dissenting chapel?—Yes; it belongs to the Methodist connexion.

463. *Chairman.*] What do you suppose is about the size of the place of interment?—I should say, nearly 40 yards in length.

464. How much in breadth?—Twenty or 25 yards wide. At a rough calculation, I should say that.

465. Is this under the chapel?—It is.

466. It is of the size of the chapel, then?—Yes.

467. Are they burying now daily?—Yes.

468. Are there any houses about this chapel?—Very many.

469. Colonel *Fox.*] What should you suppose is the height of the vault?—I should think not more than 20 feet.

470. Mr. *Ainsworth.*] Is it sunk in the ground?—You go down steps under the chapel to the vault.

471. It is 20 feet under the chapel?—From the flooring of the chapel to the base of the vault, I should calculate it to be about that.

472. Is there service in this chapel every Sunday?—Yes.

473. Of the Methodist connexion?—Yes.

474. Are they Wesleyans?—I believe they are.

475. Then there is no ground for vaults except that which is under the chapel?—The chapel is surrounded also with a piece of ground which is very full.

476. *Chairman.*] Is the smell offensive in the chapel?—I do not know as to the chapel, but in the vaults it is very offensive.

477. Mr. *Ainsworth.*] What is the flooring?—It is bricked, as far as my memory goes.

478. Bricks and boards, or regularly bricked?—Bricked.

479. *Chairman.*] Is it likely that when it is open on a Sunday, the smell will come out of this vault?—Yes.

480. And spread itself in the atmosphere?—Yes.

481. At what distance are the houses from it?—There are houses closely adjoining to it in one part, and the yards of some of the houses come to the wall of the ground.

482. There are now, you say, from 1,500 to 2,000 bodies under the chapel?—Yes.

—Yes. There were better than 1,600 when I was there; that is about 10 or 12 months ago, and they have been continually burying since that time.

483. Mr. *Ainsworth.*] You say that this is Hoole & Martin's private burial-ground, and yet it belongs to the Methodist connexion; does the Methodist connexion rent it from Hoole & Martin?—I believe it is Hoole & Martin's property altogether.

484. Then they allow the Methodist connexion to preach there?—I cannot answer as to that, but I believe that to be the case.

485. Colonel *Fox.*] Is not the whole thing a speculation, the chapel, burial-ground and all?—Yes.

486. *Chairman.*] Is it the custom of dissenting ministers to establish speculations of that sort in this town?—Yes. It has been remarked to me that they gain more money by the dead than the living.

487. Colonel *Fox.*] It is Hoole & Martin's speculation?—Yes.

488. Mr. *Ainsworth.*] Who pays the dissenting minister?—I do not know.

489. Who inters the body?—The dissenting minister.

490. Can any one go?—The person who inters the body and reads the service, I believe, is a shoemaker in the Kent-road.

491. The person who inters the body and the person who officiates in the chapel are distinct parties, are they not?—I believe so.

492. It belongs to the Methodist connexion, and one of their ministers officiates at the chapel?—Yes.

493. But for the interment of the dead Hoole & Martin appoint some other person?—Yes.

494. Who is that?—I have seen a person officiating there who I know keeps a shoemaker's shop in the Kent-road.

495. *Chairman.*] Now, turning your attention from the vaults under the chapel to the ground about it, has it ever come under your observation to see any coffins put in that ground nearly close to the surface of the ground?—I have seen them within two feet and less than that from the surface.

496. Why were they buried so high up?—I should say, because they had not sufficient room to go deeper.

497. Do you think that the gases arising from these coffins would escape through two feet of earth?—Decidedly.

498. And would it be injurious to the persons who inhale it?—Yes.

499. Mr. *Ainsworth.*] You have said it was remarked that the dissenting ministers got more from the dead than from the living?—Yes, it was so remarked to me.

500. To what did that apply?—It related particularly to Enon Chapel. Mr. Howse was then the minister; and from the stench that arose from the dead bodies the congregation in a great measure left the chapel; and the remark which was made was, that more money was made from the dead than the living.

501. It was a remark which referred to Enon Chapel chiefly?—Yes.

502. Do you know of any other?—I have never heard the remark applied to any other.

503. Colonel *Fox.*] Have they ceased to bury in the burial-ground of Hoole & Martin?—No.

504. They are still going on with the churchyard and the vault?—Yes.

505. *Chairman.*] Can you give the Committee any account of the state of St. Giles-in-the-Fields?—That is in a very awful state of fullness.

506. Give the Committee an account of its state, as far as it has come under your knowledge?—The ground of St. Giles-in-the-Fields, as far as I have observed, is dreadfully full of bodies.

507. State to the Committee the circumstances of the churchyard?—The bodies are buried very near indeed to the surface.

508. What is the nearest point to the surface that they are buried, do you suppose?—I have seen them within 18 inches of the surface.

509. How many bodies should you suppose were interred in that piece of ground?—I cannot form the slightest idea.

510. Is it customary also to bury in the vaults under the church?—They only bury in leaden coffins in the vaults there.

511. You have stated that the gas evaporates from a leaden coffin?—It does.

512. Then the mass of human bodies in the vaults of the church, and interred in

Mr. *George Whittaker.*

18 March 1842.

in the churchyard, must exhale a vast quantity of gas?—It must throw off a great deal.

513. Which evaporates in the air?—Certainly.

514. And mixes with the atmosphere?—Certainly.

515. In your opinion, must this be injurious to the health of the inhabitants in the houses about the churchyard of St. Giles-in-the-Fields?—I should say, very much so.

516. You are quite clear of what you say, that in St. Giles-in-the-Fields coffins are put within two feet of the surface?—I have seen them.

517. From your own observation?—From my own observation; but it is the same, indeed, in most grounds, for most grounds are so very full, that they have scarcely any room.

518. Most grounds, you mean, in London?—Yes.

519. You say, most grounds in London about the churches and chapels are so full, that occasionally bodies are buried within 18 inches of the surface?—Yes.

520. Can you state to the Committee any further information that has come under your notice of other churches or churchyards or chapels in this town?—No, I am not aware of anything else.

521. Mr. *Ainsworth.*] As regards St. Giles-in-the-Fields particularly, have you ever heard of any removal to make room for the interment of the dead?—The fact is, that they are, I believe, compelled to make removals everywhere.

522. In what way are they made?—That I cannot tell.

523. Colonel *Fox.*] Where do they take the bodies which are removed?—I have been given to understand they are put into a pit with quick-lime; but I cannot speak from positive knowledge.

524. Do you know any one who is likely to be able to speak to that from positive knowledge?—I should think some of the grave-diggers would be the best persons to speak to that, for they are the men who are obliged to do it.

525. The churchyard there is under the jurisdiction of the rector, I suppose?—The churchwardens.

526. Who receives the fees?—They are paid, I believe, to the churchwardens, and the minister receives his fees from them.

527. Which do you consider the most crowded and the worst of the grounds you are acquainted with?—Upon my word, I can scarcely pick out the worst.

528. *Chairman.*] Do you know anything of the ground at Spa Fields?—Yes.

529. State to the Committee what that is?—I have been in the habit of burying there for a considerable time; but you can always get a grave there.

530. Is there more space?—No.

531. What do you mean when you say, "you can always get a grave there"?—I do not know how they do it, but they manage so that there is always a grave to be got there.

532. Have you smelt the effluvia coming out in the same manner from the graves there as at other places?—Not so bad there; I have counted as many as 30 or 35 funerals on a Sunday in that ground, and they are burying every day in the week also.

533. What is the size of the ground?—Really I do not know.

534. Mr. *Ainsworth.*] Is Spa Fields burial-ground attached to any church?—There is a chapel.

535. Is it a church burial-ground?—No, it is a chapel.

536. A dissenting chapel?—Yes.

537. *Chairman.*] Are they burying there in vast numbers?—Yes.

538. Is it in consequence of the owner letting the ground at a lower rate?—Yes.

539. On the same principle as Enon Chapel?—Similar to that. They have got a small bricked place, I observed the last time I was there, in the ground, similar to a wash-house, or an outhouse of that description, and I saw a fire and smoke coming out. I cannot tell what was burning.

540. Do you suspect it was coffins?—I cannot say, because the window was blocked up and the door fastened, and I could not see.

541. Mr. *Ainsworth.*] Does Spa Fields burial-ground belong to any particular body, or can any dissenters be interred there?—I cannot answer that question; I have never made the inquiry.

542. Who inters the bodies?—I forget the minister's name; Mr. Green is the person who has the care of the ground.

543. Does he officiate?—No, he only has the care of the ground.

544. Who inters the bodies?—There is a dissenting minister who officiates.

545. To what sect does he belong?—I do not know; I have never asked the question.

Mr. *George Whittaker.*

18 March 1842.

546. Colonel *Fox.*] Is this crowded state confined to the dissenting burial-grounds?—No.

547. Are the burial-grounds of the Church of England also in a crowded state?—Equally so.

548. *Chairman.*] How long has Spa Fields burial-ground been open?—I have known it for some years; I should say 12 or 14 years.

549. Are there houses in the immediate neighbourhood?—Yes, quite surrounding it.

550. Are you at all acquainted with Hoole & Martin's burial-ground?—I have been describing Hoole & Martin's burial-ground.

551. Is not the land about it to be let on building leases now?—I believe it is all taken now.

552. For building leases?—I believe it is all nearly built on.

553. So that Hoole & Martin's is now surrounded, or will be surrounded, entirely by houses?—Yes.

554. How many bodies are interred in Spa Fields on an average in the year?—I really cannot calculate at the moment; I have counted from 30 to 35 on a Sunday frequently, and they are burying every day in the week.

555. Then that would be about 40 in the week?—Yes.

556. Colonel *Fox.*] What is the acreage of Spa Fields; it is a large space, is it not?—It is not very large.

557. *Chairman.*] About how large is it?—About two acres.

558. Colonel *Fox.*] Are you acquainted with the vaults of St. Clement's, in the Strand, and St. Martin's?—I have never been under St. Martin's; I have been under St. Clement's.

559. How are they?—It was from St. Clement's that I got the gas, by permission of the churchwardens.

560. *Chairman.*] Then your impression is, that the state of all the burial-grounds in this town is much alike?—Yes.

561. Dissenting chapels and churches?—Yes.

562. In short, that the whole of them are crammed with bodies, and that gases very injurious to the health of the inhabitants must exhale from them?—Yes; that is my firm opinion.

563. Colonel *Fox.*] Can you suggest any remedy for this; supposing you were consulted, how would you proceed in order to have a more wholesome mode of burying?—It would be advisable to take out all a considerable way from town, I should say.

564. *Chairman.*] Would there be an additional expense in so doing?—Yes, unless the Government were to form some plan whereby a poor person should be able to have the body taken at a low expense; at present the working order of society would not be able to meet the expense.

565. Colonel *Fox.*] Do you think there might be some method of burying, and, at the same time, strewing a portion of quick-lime in the grave, by which the whole would be destroyed in a short space of time?—I do not know. They use quick-lime, I believe, very greatly in those grounds.

566. Mr. *Ainsworth.*] In Spa Fields?—I should say in all grounds.

567. Colonel *Fox.*] Would there be any prejudice against it if it was made legal?—I do not know.

568. Mr. *Ainsworth.*] How is the lime put in?—It is merely strewed on, or intermixed with the ground, or the sides of the coffin taken out and strewn over the body.

569. Colonel *Fox.*] I mean that into the grave there should be put a portion of quick-lime, so as to destroy the coffin and the whole thing in a short space of time?—There is ample space, I think, without anything of the sort, if they were taken out of town. The public, I believe, certainly would not like their relatives to be treated in that way.

Mr. *Thomas Munns*, called in; and Examined.

Mr. *Thomas Munns.*

570. *Chairman.*] WHAT is your occupation?—Plane-maker, or mechanical tool-maker.

Mr. *Thomas Munns.*

18 March 1842.

571. Where do you reside?—131, Drury-lane, opposite to the burial-ground.

572. Are you in any way connected with the cemeteries out of this town?—Not in any way whatever.

573. You say your house is situate near the burial-ground?—It is exactly opposite.

574. Are there a great number of persons interred in that grave-yard?—Yes.

575. Colonel *Acton.*] Opposite what burial-ground?—St. Martin-in-the-Fields.

576. *Chairman.*] What is the usual mode of burying there?—Similar to all other churchyards which I have noticed in town; I believe they are nearly all alike. Sometimes they dig a grave, and sometimes you might almost call it making a grave instead of digging one.

577. How do you mean making a grave?—I will explain it to you. When they dig a grave they lay pieces of board about two feet wide, and instead of digging they put the earth up on each side; so that it is almost, as you may say, making a grave instead of digging it, so as to make the friends of the deceased think it is a grave, when it is only an artificial one.

578. Colonel *Fox.*] You mean to say they hardly dig at all?—It is nearly that.

579. Mr. *Ainsworth.*] What depth is that?—About two feet; sometimes more, sometimes less.

580. *Chairman.*] Have you noticed any particular system of management in digging these graves?—Not more particularly than any other way; but whilst sitting at my window I have noticed that when they have dug a deep grave they have thrown up coffins which did not seem in any way decayed. At one time I saw them bring up intestines in a bucket and put them out on the earth, and bones were thrown up, which were put in a barrow and wheeled away.

581. Mr. *Ainsworth.*] Where did they wheel them to?—To what they call the parson's house; they lifted up a flap and threw them down. It is a little house which the parson goes into in bad weather to wait until the people come with the corpse. There is a flap which lifts up.

582. Colonel *Fox.*] You are speaking of St. Martin-in-the-Fields?—Yes.

583. *Chairman.*] You say you have seen intestines thrown up?—Yes, brought up in a bucket, and it turned out like dirty size. That was laid on the earth to be filled in again. It is only the bones which they throw down the flap which they lift up.

584. How do the grave-diggers behave themselves?—I never saw anything particular; I have seen them a little tipsy at times; but from what I have understood, a man who does that work is obliged to have some extra drink.

585. Is that from the nauseous effluvia?—No doubt of it.

586. Do you yourself experience any effluvia or unpleasant smell from the churchyard?—Not that I could take on my oath to swear came from the burial-ground.

587. Do you enjoy your health pretty well?—I cannot say that I have not good health.

588. Colonel *Fox.*] Is your family in good health?—Middling.

589. *Chairman.*] Do you consider it is a healthy neighbourhood?—No; I do not think that any churchyard can be healthy; but we are obliged to live close by on account of our work.

590. Therefore if your means permitted it, you would not live in that neighbourhood?—Certainly not.

591. Have you ever seen any other instances of indecency towards the dead bodies?—One thing I should like to name. They dug a hole in the left hand corner of the ground, and as the coffins came they kept it open and would not fill it up with dirt; and several altercations I have seen take place with the friends or relatives of the deceased because they would not fill it up. They threw in a little dirt, and afterwards I have seen the grave-digger come with many pails of water and throw it over the coffins, to destroy them, I suppose, as soon as possible; it could not be for anything else.

592. To make them sink down?—Yes, or to make them sweat, which, I suppose, would make them rot quicker.

593. Then it appears that this system of interment is an act of gross indecency towards the dead?—I can only speak for myself. When I broke a blood-vessel, I expected

I expected to die every day, and it was a very unpleasant sight for a sick person to see the remains of the dead mangled in that way. I think it would affect persons of weak nerves, and hasten their complaint, and have a great effect on their disorder.

594. Mr. *Ainsworth.*] I suppose you conceive this throwing in of the water is intended for the purpose of destroying the bodies?—It could not be for anything else.

595. Did you see whether there was anything mixed with the water?—No; I saw them draw it from the cock.

596. *Chairman.*] Do you suppose there is any practice of burning the coffins?—I have seen the man and his wife burn them; it is quite a common thing.

597. Mr. *Ainsworth.*] Where does he burn them?—In his own little house; he has got a little house which he lives in.

598. Colonel *Fox.*] Do you mean that he burns them for his own use?—Yes.

599. *Chairman.*] This has been a constant practice?—Yes.

600. For years?—Yes.

601. Colonel *Fox.*] Is the neighbourhood, as far as you know, healthy?—In the lane it is pretty fair; but there are so many small courts behind, that fevers and other things are continually occurring.

602. *Chairman.*] Now give us some idea of what is going on; how many bodies have you seen thrown up in one day?—When they dig a deep grave, I think I could swear I have seen them throw up three.

602*. Mr. *Ainsworth.*] In St. Martin-in-the-Fields?—Yes.

603. Three out of one grave?—Yes, I should say so, from the quantity of coffins that were broken up, and the bones that I have seen. The old gentleman, as we call him, did not take the trouble to put the three skulls in the barrow, but I have seen him hit them with the back of his spade, and put them underneath; I have seen him do it several times.

604. You mean that he smashes the skulls?—Yes.

605. In short, they must do something of that sort, as they have not space, I suppose, to bury the bodies?—Yes; they have been so for many years, and the ground I am sure is full five feet from the surface.

606. Five feet above the surface of the street?—Yes; and it cannot be from the quantity of ground which has been brought in, for all the time I have been here I have never seen any rubbish brought in, but I have seen rubbish taken away.

607. Colonel *Fox.*] How long have you lived there?—Six years opposite the burial-ground; but I lived on the other side before that.

608. *Chairman.*] Did you ever experience a smell in summer from the churchyard?—There is so much smell behind, that you cannot tell the one from the other.

609. The parson's house which you have mentioned is the bone-house, I suppose?—Yes; but a little while ago they dug a hole in nearly the middle of the ground very deep, and they took all the bones and skulls out from the hole in the parson's house, and changed them from one place to the other, and carried them away in barrows-full.

610. Generally speaking, do you consider that these fellows are obliged to drink, in consequence of this work?—In my opinion it is impossible they could do it without; the smell is so great, they are obliged to do it.

611. Are they obliged to have recourse to spirits?—That is my opinion.

612. Mr. *Ainsworth.*] Do you mean to say that spirituous liquors would carry away the smell?—It is what all working men fly to if they have a nasty job to do.

613. *Chairman.*] Is your observation confined to this churchyard in Drury-lane, or can you tell the Committee anything about other grave-yards?—I have not been in any other, so as to notice it, in my life.

614. In this grave-yard, within what distance do they bury from the surface of the ground?—In my opinion it could not be above a foot from the surface, but that is not the general run. I do not mean to say they would always do that, because they are sometimes obliged to dig deep.

615. Have you got a well in your house, or do you get water from pipes?—Our water comes from the main into a cistern, and from the cistern into the cock which we draw it from.

Mr. *Thomas Munns.*

18 March 1842.

616. Are there any wells in your neighbourhood?—Not that I know of.

617. Are there any pumps?—I do not know of any one nearer than Bow-street, and there is one at the top of Wild-street. There may be others, but I don't know them.

618. Do you not think that the rain soaking through this mass of corruption, which is above the level of the ground, would filter into the wells?—If there were any wells there I have no doubt that it would, because water will always find its level.

619. Colonel *Fox.*] Should you have any objection, if there was a law made that there should be so much lime put in with the body, so as to destroy it in a certain time?—Answering that question as regards myself, I should have no objection to such a thing as that.

620. Do you think that, generally, people would dislike that?—The lower order of people are against such a thing as that, particularly among the Irish.

621. *Chairman.*] You stated that a grave was kept open; how long did you know one of those graves kept open?—I think I could say it was kept open from two to three months.

622. What object could they have in so doing?—To save the trouble of opening it every time for a new tenant.

623. Was that immediately under the window of the dwelling-house?—Under his own window, and under the side window of the cap shop in Drury-lane.

624. So that all the smell and putrefaction of the coffins has risen up?—Yes; a wall is on one side of the grave.

625. How long was it kept open?—From two to three months.

626. Mr. *Ainsworth.*] With no covering?—Only boards and a bit of earth thrown over the boards.

627. *Chairman.*] Still the effluvia must have risen up?—Yes.

628. Colonel *Fox.*] Was there no complaint made of that?—There was no complaint that I heard of; I could see from the window that altercations took place between the friends of the deceased and the grave-digger, and sometimes they did not like to go away without seeing the grave filled up; however, he would not do it.

629. *Chairman.*] Nobody could know it except yourself, and those who looked immediately into the grave-yard?—And the man himself.

630. Is there anything further which you can state to the Committee on the subject of what you have seen?—I do not know that I have seen anything more than what I have stated.

Mr. *Robert Carr*, called in; and Examined.

Mr. *Robert Carr.*

631. *Chairman.*] WHAT is your occupation?—Carpenter and Undertaker.

632. How long have you been in that occupation?—I have been in the undertaking business about 18 years.

633. Mr. *Ainsworth.*] Where do you live?—13, Duke-court, Bow-street.

634. From your occupation you are pretty well acquainted with the different church and grave-yards in the city?—Yes.

635. Will you state to the Committee generally, what you have observed in them?—All the burial-grounds that I have been in the habit of going to are very full, and the coffins are generally within a little of the surface.

636. At what distance generally?—The general distance would average about four feet or four feet six inches.

637. Are some nearer than that?—Yes, some are nearer.

638. How near?—I have seen some interred not above two feet from the surface.

639. From your occupation obliging you to go often to these grave-yards, have you found any unpleasant effluvia or smell arising from them?—Yes, I have sometimes, but not very frequently; the most that I have felt has been when I have buried in places under chapels.

640. There you have felt the effluvia?—There I have felt, at times, very ill for several days afterwards; I have had a bad taste in my mouth, and been sick.

641. Want of appetite?—Yes. I could drink.

642. What are the burial-grounds with which you are best acquainted?—Spa Fields, St. Clement Danes, and the Savoy.

643. Mention

643. Mention to the Committee the general state of Spa Fields; first, the size?—I should fancy, at a guess, that there is full two square acres of ground.

644. How many people have been buried there do you think?—I should say that they bring there 20 a week on an average, in the year round, at least; I have known several times, when I have been there, 25 and 30 to be buried on a Sunday.

645. For how many years have you known Spa Fields burial-ground?—I do not know how long it has been a burial-ground, but I have known it for 16 years, having myself gone backwards and forwards there.

646. Then, at the average of 1,000 a year, that would be from 16,000 to 20,000 people?—Yes.

647. Do you consider it to be very full now?—We never see any coffins hardly there; when a grave is open we do not see many coffins.

648. How do you account for that?—I cannot account for that.

649. What is your suspicion?—I cannot say anything on suspicion, unless I know the positive fact.

650. You surmise something?—That which I think I may think wrong, and therefore it would not be right to state it.

651. Colonel *Fox.*] Still, if you think anything wrong, and by giving your opinion the public might benefit by inquiring into the matter, it would be right that you should state it?—Unless I know a thing positively I cannot speak to it; in whatever I may think I may be wrong; but if there was anything that I knew I would speak plainly and openly.

652. Mr. *Ainsworth.*] If you knew it as a fact it would not be a surmise; the only question is, what do you suspect; do you suspect the removal of the coffins?—With respect to the removal of the coffins, it is certain they are removed, because we see coffin-boards used to put on the sides of the graves.

653. Then they are removed?—Yes, and the coffin-boards could not have been decayed, or they could not have been used in that way; they had not remained in the ground as they ought to have done, because when a coffin is deposited in the ground with the body, I should fancy myself it ought to remain there for ever, and never ought to be disturbed; and when we see coffin-boards and the sides of coffins put against the sides of the graves to prevent the earth going in, we have a suspicion that the boards of the coffins are taken wrongly.

654. Colonel *Fox.*] Is there any doubt that there is burning sometimes?—I never saw any.

655. Is there a bone-house there?—There is a little hut where they keep their tools, but I do not know that they have a place where they deposit bones, as they have in some churchyards.

656. Is this place surrounded by houses?—Yes.

657. Entirely?—Now it is; it was not always; there have been a few houses built within the last two years.

658. Do you consider that the vicinity of these houses to this grave-yard is injurious to the health of the people who occupy them?—I should not think so myself, because it is a wide space; a very large field; but I am not competent to decide that question.

659. You do not like to speak without being sure?—Certainly not.

660. Would you prefer burying in Spa Fields to any other place?—I should myself.

661. Why?—I consider it to be a better burial-ground than many of the parochial burial-grounds.

662. Do you think it better than St. Clement Danes?—Yes.

663. Mr. *Ainsworth.*] Do you mean with reference to its being so full?—I consider it is more clear, though they bury so many people.

664. Colonel *Fox.*] Is it a more open space?—It is a more open space, and the graves which are opened there are better to the eye; you do not see so many bones lying about; the ground is not so filthy.

665. *Chairman.*] In St. Clement Danes, or in any of the church-yards you have been in, have you, in hot weather, smelt an effluvia?—I cannot smell.

666. Although you have not the sense of smelling, have you any means, to your knowledge, of telling us whether it has affected other people?—I do not know that it has, for undertakers meet with so many disagreeable things, that you seldom hear them complain at all.

667. Your not smelling is rather a benefit to you than a disadvantage in that profession?

Mr. *Robert Carr.*

18 March 1842.

profession?—It is a benefit to me, inasmuch as I am not sensible of what I inhale; but I have have had a very bad taste in the throat.

668. When you have attended those funerals?—Yes.

669. Mr. *Ainsworth.*] After you have been at one of the interments have you had an unpleasant taste in the throat?—Yes, if the body happened to be very bad, which is too frequently the case among poor people. If a person dies, we will say, on Wednesday, the following Sunday is the convenient day. The first Sunday is too soon for them; they keep it till the Sunday following, when you can hardly go near the body, it is so bad.

670. *Chairman.*] Have your children been afflicted with illness?—My little boy was ill some time ago, in consequence of a body that I had in the house; and it made me ill also.

671. Why did you have a body in your house?—A man died at the King's College Hospital, and I removed the body to my house, the people not having convenience to take it to their own home; then it was not convenient for them to bury it in a reasonable time, and at last it became so offensive that we could hardly bear the place. The body was placed on a bench in the shop. My little boy works a little in his way, and this body was on his bench; it was very much in his way; he kept puddling about at his little bench, and I really believe that his illness was occasioned by that, in consequence of being myself so ill; he was more about the coffin than I was.

672. What was his disorder?—He was taken ill very suddenly; he breathed very quickly, and I supposed that he would not live long. I went to Mr. Walker; he came, and he said he was very bad, and if something was not done very quickly he would have a most severe illness, but he would do what he could.

673. Did he cure him?—Yes, to my astonishment, and of every person who saw the child.

674. I suppose that has been a lesson to you, never to have a dead body in your house again?—Yes; and if ever I should have another, if it is not buried within a reasonable time, I will go to the overseer and insist on its being done.

675. Mr. *Ainsworth.*] To whom does this Spa Fields burial-ground belong?—I think it is private property; I do not know how many individuals it belongs to. I believe it is freehold ground. It does not belong to the chapel; it is distinct from the chapel.

676. Then you think it belongs to some individuals or company?—Yes; the person who is called the manager is Mr. Green.

677. Does he receive the fees?—Yes.

678. Do you know to whom he gives them?—I do not.

679. *Chairman.*] Now you, as an undertaker, have great opportunities of seeing the customs of the poor; have the kindness to state to the Committee your opinion as to the custom they have of keeping bodies so long before interment?—In many instances persons say, "We cannot bury under a week;" that is from custom. Others have not the means of getting a black gown, and they cannot follow in a coloured one; that is their bit of pride; then it is put off, it may be, two or three days on that account. They will not have their relatives buried by the parish; they would rather do anything than that, saying they wish them to be buried respectably; and then the end of it is, that myself, and other people like me, often bury for nothing, not intending to do it. They cheat us; and if they would do away with their little pride, and let the parish do it, the bodies would be removed in a reasonable time, and such men as myself would not be imposed on as we frequently are.

680. Mr. *Ainsworth.*] Does any drinking go on?—It is generally a drunken job; it is too frequently so.

681. *Chairman.*] From what you have stated, as to this dead body being in your house, making you and your boy sick, your impression is that it is very injurious to the health of people keeping bodies in that way?—I am sure of it.

682. And you attribute it to the two causes you have mentioned?—Yes, keeping bodies above ground too long; and it would be a very good thing if it could be altered, so that a body should be compelled to be buried within six days.

683. Colonel *Fox.*] Do you think there would be any objection to burying bodies with a certain quantity of quick-lime, sufficient to destroy the coffin and the whole thing in a given time?—There would be a general objection amongst poor people, because you cannot bring poor people to understand that which is really

really beneficial for themselves. I have seen a child which has died with the small-pox, which, perhaps, had been dead eight or ten days, and the face completely black, and all I could do would not keep the mother from kissing that child.

684. You yourself would not have any objection to it?—No.

685. *Chairman.*] Could not this prejudice of the poor people be overcome?—In time; nothing but time would overcome it. During the time of the prevalence of the cholera morbus, I buried the poor in the parish; I lived in St. Mary-le-Strand; I used to put lime into the coffins, and there was an objection to it even at that time by persons who were in no way interested, poor people round the neighbourhood. We brought a body from Greville-street, and put it in a shell, and the next day I put it in a coffin and put lime in it; I nailed it down and put it in the ground, and the people around seemed not at all to approve of the lime being put in the coffin.

686. Assuming that people were obliged to be buried without the precincts of any town, would the expense of interment be very much increased, or could any measure be devised to save the additional expense, if any?—Some years ago St. James's burial-ground was out of town, and taking up from St. James's parish, from Piccadilly we will say, to the Hampstead Road, it required two more men, except it was a very heavy person, and then it would require four. If there were two additional men it made the expense 6*s.* 6*d.*; and if there were four extra men it was double that, namely, 13*s.*, and then the people had to walk there and back. St. Giles and St. Martin's have grounds, the one at Camden Town, and the other just by St. Pancras Church. Persons who cannot afford a hearse and coach are obliged to have two extra men or four extra men, according to the weight of the body which is to be carried. It increases the expense on an average about 12*s.* or 13*s.*

687. You have attended chiefly, you say, Spa Fields, St. Clement Danes, and the Savoy?—And St. Mary-le-Strand.

688. Which of those is the worst?—St. Mary-le-Strand and Portugal-street; I do not know which is the worst of the two; I think they are both so bad you can hardly tell the difference.

689. Are they both of them surrounded with houses?—Yes.

690. Entirely?—St. Mary-le-Strand more so than Portugal-street.

691. Mr. *Ainsworth.*] What is the Savoy?—The Savoy is a very old burial-ground, where soldiers used to be buried some years ago; but now it is the finest little burying-place in London.

692. Why so?—It is made into a little garden.

693. Whereabout is it?—Very near the Savoy Chapel.

694. You have no remarks to make as to anything that has happened in the Savoy?—No.

695. *Chairman.*] You are acquainted with St. Mary-le-Strand burial-ground?—Yes.

696. To what height has the ground got above the level of the circumjacent ground?—About three feet, or nearly four feet.

697. Does it rise up any distance towards the houses; is it as high as the window of the houses that look towards it?—No; it is nearly up to the parlour window, within a couple of feet.

698. How much is that above the street?—I think about four feet.

699. That is surrounded with houses, you say, in every direction?—Yes.

700. And so is the Savoy, is it not?—The Savoy is much more open; Portugal-street is not so confined, because a current of air passes through the street.

701. Mr. *Ainsworth.*] I suppose your business is chiefly confined to this portion of London?—To that neighbourhood more especially.

702. You are not employed, perhaps, in other directions?—I have been in the city.

703. Can you speak of any of the burial-grounds in the city, or in Southwark?—There is Bow Church, in the city, that has no burial-ground.

704. I mean the burial-grounds in the city?—The burial-grounds in the city are very small, and the burials are not very frequent, because most of the citizens manage to accumulate money, which enables them to bury out of town.

705. Colonel *Fox.*] Do you know St. Andrew's, Holborn, burial-ground?—Yes; that is very full.

706. Mr. *Ainsworth.*] Can you speak to it?—From having been there several times, I know they have no room to spare.

Mr. *J. Michael Lane.*

18 March 1842.

Mr. *James Michael Lane*, called in; and Examined.

707. *Chairman.*] WHERE do you reside?—No. 30, Clement's-lane.

708. How long have you lived there?—Between three and four years in the house I live in, and next door to it.

709. In what part of the lane is your house situated?—The top end of it, towards Clare-market.

710. How far from the burial-ground?—My window is not more than three feet from it.

711. What is your business?—Cane-worker in chairs.

712. Are you connected in any way with the cemeteries about this town?—Not in the least.

713. As you live near this churchyard, state generally to the Committee what you have observed to take place there?—I have observed them bury there very frequently; it is almost every day in the week they are burying.

714. How many bodies in the course of the day?—Sometimes one, sometimes two, sometimes three, more or less; but I never observed more than four, I think.

715. Colonel *Fox.*] Not on a Sunday?—On a Sunday and week-day too. Sometimes they dig a grave without burying at all on the day they dig it.

716. *Chairman.*] Do you not have more on a Sunday than on other days?—At times; one day with the other it is pretty nearly on an average.

717. What is the mode of interment practised?—Digging a shallow grave at times, and then a few weeks afterwards they will go a good depth. There was one occasion when my wife noticed it more than at any other time; there was a corpse buried on a Sunday, from the hospital; there were two females following it; what made us take particular notice of it was, that they came from the hospital, and went out at the gate across the ground towards Clare-market, and then came back again to the hospital. In the course of about a month afterwards they opened this grave again, and when they opened it they brought the coffin up in pieces, not split, but the sides were taken from the head and foot-board; they brought it up without splitting, just as you might take a case to pieces, or the lid off a box. After they had brought up the lid, and laid it on the ground, they brought up the bones with the flesh hanging in tatters upon it, then about four shovels full of soft substance came up, and my wife called to the person in the next room to witness the thing; they called out to the men; the men made them no answer, but turned their backs towards the houses to try to avoid the people seeing it, but the window being high, we could see every thing that came out of the grave as plainly almost as if we had been close to them; they were not far off. At another time a body was brought out of King's College Hospital, and it was put down without any service over it. I do not know what was the reason of that.

718. Mr. *Ainsworth.*] Was it in a coffin?—Yes. It was in the summer that was buried, and I think it is, as near as I can calculate it, between two or three months since they brought the coffin up, and the wood was as fresh as when it went down, except being wet, and that they brought up in whole pieces, without being split.

719. How came it to be wet?—The wood looked soddened with wet. They took the wood, and put it in one corner, behind a sort of shed which used to be kept for putting bodies in for which there might not be owners.

720. Did they burn it occasionally?—I never saw them burn any of it.

721. Colonel *Fox.*] Did you ever see any burning of any sort?—I have never seen them burning anything; I have seen them take it away in sacks.

722. Lord *Ashley.*] Have you known that wood offered for sale?—I never took notice of that; I never buy wood myself to burn. I have heard of people buying it in the neighbourhood.

723. Colonel *Fox.*] You do not know that?—I do not know it myself.

724. Is there any bad smell?—In the summer.

725. *Chairman.*] Very bad?—Very bad in the hot weather.

726. Is this grave surrounded with houses?—The hospital is on one side, Portugal-street on another, the house I live in on another, and a slaughter-house on the other; it is surrounded on three sides out of four.

727. Do you find your own health and that of your family pretty good?—I cannot say I have good health. Last summer I was affected more than I ever

was

Mr. *J. Michael Lane.*

18 March 1842.

was before in my life; I was attacked by violent pains in my head for some weeks, and then it came on to fits, and I have been attacked several times with them. My wife is not in a very good state of health in general.

728. Have you any family?—I have two children.

729. How are they?—One is middling, and the other, a little girl, has a sort of breaking-out continually; if you physic her, she gets bad again. I had one child which was ill when it was about three weeks old; it died at the month. It was ill a week, and the doctor it was taken to said, "Take the child home; it will not live; it is the air of that quarter which is poisoning it." A stench arises there in hot weather.

730. What months in the year do you smell it most?—June, July, and August.

731. Mr. *Ainsworth.*] There has been no hot weather in London for the last two or three years?—Last summer it was very offensive. There is very little air attached to that quarter. You may go across the street in about a stride and a half; the houses are quite close.

732. Lord *Ashley.*] There is no free passage of air?—No; there is only what comes from the burial-ground on one side. The street is narrower than this room, I should suspect.

733. *Chairman.*] What is the size of the grave-yard?—It is not a very large one.

734. On a rough guess, what should you say?—I should say about an acre and a half. It has been enlarged since the hospital was erected; they have taken away a great deal of the fence.

735. Colonel *Fox.*] Is there much sickness in the neighbourhood?—Very much at times, especially in the summer months; there is a great deal in the summer. A number of persons have died of fever since I have lived in that neighbourhood. There were no less than four or five persons attacked with it.

736. *Chairman.*] Have you ever yourself smelt any thing?—I have. I have been sitting at the window and been obliged to go away frequently when I have been eating my meals.

737. Are the walls of the houses in good condition?—They are very damp. The houses do not go quite close to the burial-ground; a wall intervenes between the burial-ground and the houses.

738. Have you ever observed a little black fly, something like a bug, rising out of that ground?—No; I have observed a sort of longish thin fly.

739. Coming out of the grave-yard?—Yes.

740. Colonel *Fox.*] You do not mean a common gnat?—No; a long thin fly; not a natural house fly.

741. *Chairman.*] Would you live in that neighbourhood if your occupation did not oblige you, or if you had the means of living elsewhere?—If I had the means of paying a higher rent, I would not live there.

742. Mr. *Ainsworth.*] Are the rents low there?—Yes; I pay 1*s.* 9*d.* a week for the room I reside in, and that is at the top of the house.

743. What size room is it?—About two thirds the size of this room, I should say, or not quite so large.

744. Colonel *Fox.*] Do you think there would be any objection on the part of the people generally, or should you have any objection yourself to have a law that every body should be buried with a certain quantity of quick-lime in the coffin, so as to destroy it in a certain time, instead of its being destroyed by worms?—I should have no objection to it; it does not matter to me how my body decays; but I like to see a body in a proper state of decay before it is chopped to pieces and exposed to people round about.

745. Would you object when a person is dead that quick-lime should be put into a coffin, so as to destroy it quickly?—I should not object in the least.

746. Do you think there would be a feeling against that?—I have never heard it talked of; I have known it in some instances where people have applied it themselves.

747. Mr. *Ainsworth.*] In what station of life were those persons who employed this mode?—Poor persons.

748. From what cause do you conceive?—To prevent them, as they thought, from being taken up; that was the idea they had. They considered it would render the body unfit for the use of the surgeons.

749. *Chairman.*] Does the little long fly you have mentioned rise from the churchyard?—I cannot tell from what cause it arises.

Mr. *J. Michael Lane.*

18 March 1842.

750. Is it a fly you never saw anywhere else?—It is a fly I never saw in houses away from a grave-yard.

751. You never saw it in the country?—I never saw a fly of the description in the country.

752. Are there any about now?—My little boy caught one on Monday or Tuesday. It is a long thin fly; he showed it to me.

753. Are your neighbours in good health or not?—I do not know anybody who is particularly in bad health at present; but I associate very little with any persons in the neighbourhood, and I am sometimes not out of the house once in a day; I may not be out all day, according as business runs with me.

754. Lord *Ashley.*] Do you think the children running about the streets, in your neighbourhood, look as healthy and rosy as those living further off, not near a churchyard?—Some look pretty well and some do not; but I do not think you can judge of the health of a child from that. I have a little girl who has as great a colour in her face as any person, and she sometimes experiences a bad state of health. A number of children about the neighbourhood, within the last four or five months, have had the small-pox in a very bad state. Several of them have lost their lives by it, and a very bad sort indeed it was considered to be. Whether it was caused by the grave-yard, I cannot state.

755. *Chairman.*] Have you, in the early part of the morning, heard a knocking in the churchyard?—Yes.

756. What did you attribute that noise to?—I know what it was.

757. What was it?—They were destroying the coffins.

758. In the morning they destroy the coffins?—Before daylight, and as soon as I have got up at daylight, I have looked, and I have seen them at work with handkerchiefs tied over their noses and mouths.

759. Breaking in the coffins?—Yes.

760. Is that to make room?—Yes.

761. And to make fire-wood, I suppose?—I should say so, for they carry it away in sacks. The men do it as carefully as they can, to prevent people seeing it; but the people who live there, whose windows overlook the place, cannot help observing it. But what made me look more particular than anything was, that I had a child buried there; and if they had broken that grave open, I should have gone and given them in charge to a policeman.

762. In passing by there, have you ever seen a tarpauling put up when they were opening a grave?—Some time ago there was.

763. Why did they put that tarpauling up?—They did that on Tuesday last, when they opened a grave for the reception of the policeman who was killed in Holborn; he was buried there on Tuesday; the grave was open all night, and they had a tarpauling over that.

764. What was that for?—I suppose to keep out the wet.

765. Not to prevent the public from looking in and seeing the bodies?—They cannot get there; there is a railing, and the houses surround it; there is no way for them to get in but over the railing; if they were curious enough to get over the railing, they might see it. Two or three years ago there was a tarpauling fixed up along the railing; that was when the chief of the bodies were disturbed.

766. And did you hear this knocking or breaking open of the coffins every morning before daylight, or how often?—I have seen it very frequently; they do not use a pick-axe, but they have got a tool, like the face of a hammer at one end, with a sharp point, which comes down tapering at the other end; it is about nine pounds in weight; that is what they use to break the coffins.

767. That is a more handy instrument?—It is so.

768. Who is it does this work?—The grave-diggers; there are generally two of them work together.

769. Did they do this to make more space in this yard, which is already full, or merely for the wood of the coffins?—To make space to put the dead in I should suspect; because many times I have witnessed it, and so has my wife at the same time. We have remarked a particular spot, and we have said, "We will see whether that is disturbed;" we have looked out of window, and when they have dug the grave, it has been the top coffin; and in the course of a fortnight or three weeks we have seen them dig a deep grave. What could have become of that coffin, if they did not disturb the bodies?

Mr. *J. Michael Lane.*

18 March 1842.

770. Colonel *Fox.*] What became of the contents of the coffin do you suppose?—It is mixed with the mould. This body, which was brought up piece-meal, with the flesh hanging to the bones, and stuff brought up in shovels without bones, was let down in a solid lump again on the top of the coffin; and the women called out to the men, and told them they had better take people's money out of their pockets, and not bury the dead at all, or bury them without a coffin. It is a shocking place for disturbing the dead.

771. Mr. *Ainsworth.*] That is Portugal-street?—Yes; I think since I have lived in that neighbourhood there is one part of the ground which has not had above one grave dug in it.

772. What is the reason of that?—Because Mr. Fitch will not allow it.

773. Who is Mr. Fitch?—The sexton.

774. What was the reason of that?—I cannot tell you.

775. Mr. *Beckett.*] What should you think was the reason?—I cannot form an opinion; he has had a lot of shrubs planted there, and perhaps he wishes to preserve them.

776. Lord *Ashley.*] Do any of the houses look into that part of the ground?—Mine does.

777. What is the situation of that ground in which interments are not allowed; is it close under any houses?—It is toward the railings.

778. *Chairman.*] Do you experience a more unpleasant smell when they have been breaking open these coffins and throwing out the masses of flesh, than you did before?—I cannot say that I smell anything more particularly, but it is because it has been in the cold weather that this has happened; in the summer-time there is a stench arising from it.

779. Is there not a greater stench when they work at the coffins in this way, and break them open and throw the masses of flesh about?—We sometimes are in bed when they are doing it.

780. Do they always do it before daylight?—Not always.

780*. Do they sometimes do it in daylight?—Very frequently; I have seen them break coffins to pieces in the daytime, and carry the wood to one part of the ground; they have got a sort of vault under the watch-house where they carry the bones to, and they put some hundreds of bushels of human bones in that place.

781. And the flesh is brought up with the mould?—Yes.

Mr. *Edwin Eddison,* called in; and Examined.

Mr. *Edwin Eddison.*

782. *Chairman.*] YOU are Town-clerk of Leeds?—Yes.

783. What is the state of the churchyards in the borough of Leeds?—The position of the parochial burying-grounds in the borough of Leeds is such at present, that if during the next four months the whole of the dead were to demand, as they have a right to do, interment in that ground, there could be no interment, except within three feet of the surface. The importance of remedying this evil is so strongly felt, that at the present moment we are preparing a petition to induce the House of Commons to embody provisions in a local improvement Bill for providing a burial-ground for the township of Leeds. A short time ago a complaint was made to the then mayor, who is one of our aldermen, that a body had been disinterred, for the purpose of making room for some other interments. A complaint was also at the same time made of an offensive smell, which no doubt arose from the dead bodies in the burial-ground. This ended in a charge being brought before the mayor against the sexton; for it is, in fact, an indictable offence, the indecent exposure of the bodies of the dead by taking up the coffins in that way. On investigation, although the vicar felt so indignant at the conduct of the sexton, that, in a conversation with the mayor, he stated that he should certainly dismiss him, yet the justification arising from the peculiar circumstances of the case was such as to convince him that the man was not much to blame, though he was unquestionably to blame, as it was an indecent offence, but he was not otherwise culpable. In consequence of that, a representation was made to the churchwardens. Many inquiries were made; but we are unfortunately there, as they are in many other places, at variance on the point of the church-rate question, which is very materially involved in this question. Ours is a borough comprising about 22,000 acres of land, with about 163,000 inhabitants. It is divided into eleven townships, the town-

Mr. *Edwin Eddison.*

18 March 1842.

ship of Leeds containing about two-thirds of the population. In all those townships, with the exception of one, they have sufficient burial-ground for themselves, provided by voluntary contribution, or in some instances by a local ecclesiastical church or chapel rate. Therefore this makes a twofold difficulty; we have first the church-rate question, and then these parties say, "You shall not tax us for your parochial rate" (for the borough and the parish are not co-extensive); "you must provide your own grounds." A suggestion was made to the vicar that a burial-ground should be had on a principle similar to that one which is at present in existence at York, namely that one-half of it should be appropriated to the Church, and the other half should be appropriated to dissenters of all denominations; that, I understand, at present is agreed to. I for one, as an inhabitant, feel an awful responsibility, because I am satisfied, that if this goes on in the condition it at present is, some very serious disease must arise. Dr. Hook's proposal (I have it not from the Doctor himself, but I believe his proposal was) that he was perfectly willing, not only to do that, but I think also to forego the fees as far as he was concerned, and use his endeavours that no church-rate of any kind should be applied for. I only mention this to show you the great anxiety of all parties to have some redress.

Mercurii, 6° die Aprilis, 1842.

MEMBERS PRESENT.

Colonel Acton.	Mr. E. Denison.
Mr. Ainsworth.	Colonel Fox.
Mr. Beckett.	Lord Mahon.
Sir William Clay.	Mr. Vernon.

W. A. MACKINNON, Esq. IN THE CHAIR.

George Alfred Walker, Esq. called in; and Examined.

G. A. Walker, Esq.

6 April 1842.

784. *Chairman.*] YOU are a Medical Practitioner?—I am.

785. In what part of the town do you reside?—In Drury-lane.

786. Do you practise to any great extent in that neighbourhood?—Yes, to a considerable extent.

787. To as great an extent as any one in the neighbourhood?—I think so.

788. Are you connected with any of the cemeteries lately established near London?—No; neither remotely nor directly.

789. Have you turned your attention to the subject of interments in towns?—I have.

790. Will you have the goodness to state to the Committee your opinion with regard to what has come under your observation as to the injurious effect of interments in your vicinity?—My attention was first directed to the subject, or rather, I commenced my examination in my own neighbourhood. I had a thorough conviction in my own mind that something must be done, and that the sooner it was done the better. It is about five years ago since I commenced the investigation. I have had a good deal to do among my patients, and my time has been fully occupied; still the conviction has never left me, that the mode in which the dead were disposed of was a considerable source of disease; I have no doubt of that. I have frequently attended patients in Clement's-lane, which I always considered as an infected district. I have resided in that neighbourhood about seven years. I have seen cases of disease in which there has been activity without power, involving perhaps no particular organ or tissue; instances of sudden death; and there has been a fearful mortality in that neighbourhood.

791. Do you attribute those instances of sudden death, and this great mortality, to the neighbourhood?—Not exclusively; there are other causes, and some operating extensively; that lane is in a very filthy state; I think it a disgrace to the metropolis.

792. Do

792. Do you consider that a principal cause?—I do; but more especially the mode in which the dead are disposed of.

793. Will you state in what way that operates?—Reasoning from particular instances to general results, I should say that if one man can be affected by exhalations from the dead (and I know that men are frequently so affected) another may. There is no doubt at all that from the surface of a grave-yard, as the bodies are disposed of in the metropolis and other crowded places, noxious emanations must constantly arise; and even leaden coffins placed in vaults cannot retain the destructive exhalations. In some localities we find bodies placed within six inches of the surface; that occurs in my neighbourhood.

794. You say it is quite useless to enclose the bodies in lead?—Yes.

795. On what do you found that opinion?—The expansive force of the gas.

796. Do you mean that the gas escapes through the lead?—It will either do that or burst the coffin; but the sexton occasionally orders his men to tap the coffin. I never knew an instance of a sexton doing it himself. I have an apparatus to draw up gas into a bladder; I never obtained but one bladder full; it escaped so rapidly when brought into my house, that in one minute afterwards my sister and cousin, who lived with me, smelt it on the third story, and were obliged to leave the house. It was quickly absorbed by water, and I lost my chance of analyzing it.

797. Have you observed sickness to be more prevalent in those houses which overhang or are situated near church-yards?—Yes, I am quite certain of that; and in my particular locality there are sunk areas on the side of the grave-yards, and during the action of heat and moisture, gases must evolve; the heavy gases fall on the surface, and flow over, though invisible to the eye, into those sunk areas, and become part and parcel of the atmospheric air which is breathed.

798. Lord *Mahon.*] Are the effluvia very offensive in passing the grave-yards?—They may be distinctly smelt, and they are very unlike any other smell. I was passing with my friend, Dr. Peter Ennis Green; we had examined a body in Clement's-lane, and were coming down in the direction of the Strand; he exclaimed, "Good God! what a horrible stench; there must be a dissecting-room." I said, "No, I will show you where they dissect;" and I took him up a narrow passage to the burial-ground, and he smelt it in an instant: there the bodies are, I will not say interred, but placed within a few inches from the surface, in a damp soil, which, conjoined with heat, rapidly promotes putrefaction.

799. What is that burial-ground?—It is called the poor ground, at the bottom of Clement's-lane. Starting from the upper end of the lane, there is the burial-ground in Portugal-street; on the other side, about the middle, entirely surrounded by houses, that abominable place Enon Chapel; a little further down are deposited a number of bodies not six inches from the surface.

800. Do you observe that the grave-diggers themselves are more liable to sickness than other persons under like circumstances?—I think there is a peculiar expression about a grave-digger that no one can mistake; there is a sallowness of face, a want of expression or of energy in the countenance; but, generally speaking, those men stimulate greatly; it is only the bold and forward men who suffer.

801. Why so?—Because the old ones, being very knowing, very well informed in their avocation, have passed through the ordeal the young man is expected to be engaged in; they will generally stand at the side of the grave, allowing the young man to do the work; the very shaking of a coffin, the digging amongst a tier of coffins, which must be done and is done in many grave-yards in London, throws out noxious effluvia.

802. Mr. *Ainsworth.*] Do you think the occupation of a grave-digger leads to much intemperance?—I have no doubt of it; with scarcely an exception they are drinking men; stimulation will be of course temporary strength.

803. Lord *Mahon.*] What do you consider to be the average length of time that a human body buried in a coffin of the common kind will take to be consumed?—I think at least seven years ought to be allowed.

804. How long will they take if buried in leaden coffins?—I think the old form of coffin, which weighs eight or nine pounds to the foot, will retain it much longer than milled lead. I will mention a circumstance which occurred a short time ago in the Strand: a portion of the old grave-yard was dug up to make a sewer, which was much needed in that neighbourhood; one of the men

G. A. Walker, Esq.

6 April 1842.

employed struck his pickaxe into a coffin; that body had been buried in the year 1789; the gas was clearly perceptible—it issued from the coffin like the steam from a teapot spout, and the stench was insufferable.

805. At what depth was that coffin from the surface?—About five feet; but no judgment can be formed as to the present depth, because that neighbourhood has undergone considerable changes.

806. *Chairman.*] Will you state to the Committee what are the particular places whence you have derived the observations which you have made?—Most of those I am about to name I have personally examined; they are, the burying-ground in Portugal-street; Enon Chapel, Clement's-lane; St. Clement's Church, Strand; and the vaults of St. Martin's-in-the-Fields; Drury-lane; Russell-court, Drury-lane; St. Paul's, Covent Garden; St. Giles's Burying Ground; Aldgate Churchyard; Whitechapel Church and Vaults; St. Mary's Catholic Chapel, Moorfields; Spitalfields Ground; Bethnal Green old Ground; Stepney Burial Ground; Mulberry Chapel, St. George's-in-the-East, Ellinore Swedish Protestant Church; St. George's Church, Cannon-street East; Ebenezer Chapel, Ratcliff Highway; Sheen's Ground; Shadwell Churchyard and Vaults; Trinity Episcopal Chapel, Cannon-street Road; The Mariners' Church, Wellclose-square; Bunhill-fields, City Road; St. Luke's, Old-street; Clerkenwell Church, four burial-grounds and vaults; Spa Fields; St. James's Burying Ground, Clerkenwell; St. Ann's, Soho; Elim Chapel, Fetter-lane; St. Saviour's Church, Southwark; the Cross Bones, belonging to the same parish; All Saints, Poplar; St. Andrew's, Holborn; St. Anne's, Limehouse; Bermondsey; Christchurch, Surrey; St. George's, Hanover-square; St. George's, Middlesex; St. George's, Southwark; St. James's, Westminster; St. John's, Hackney; St. John's, Westminster; St. Leonard, Shoreditch; St. Luke's, Chelsea; St. Margaret's, Westminster; Kensington; Islington; Lambeth; Newington; Rotherhithe; Paddington; Pancras; and many others.

807. Speaking from your personal knowledge, in every one of those places you have enumerated, your opinion is, as a medical man, that the burial of the dead has been injurious to the persons living in the neighbourhood?—I am sure of it. It cannot be otherwise.

808. You have no doubt it affects their health?—I have no doubt it does.

809. Have you found that, independently of the injury to health, the inhaling of this noxious gas has any moral influence?—I should say, that if a man was depressed from any cause, he would most likely take stimulants. I have no doubt that grave-diggers are compelled to drink; and that they could not execute their office without it. I know that a grave-digger cannot execute his office without drinking, and drinking to excess.

810. You state, from your own knowledge, as a medical man, that it affects the health of persons living in the vicinity?—There is no doubt of that.

811. Would you say, as a medical man, that the gases escaping from the grave-yards and mixing with the general air, affect the health of the persons living round?—Yes.

812. Mr. *Denison.*] Will you state whether you have seen disease arising from that cause?—I have; but it is sufficient to state, that the neighbourhood to which my attention has been especially directed is surrounded with grave-yards; and that there are hundreds of tons weight of human bodies resting temporarily in the earth until displaced to make room for a succeeding tenant. Bodies, in many situations, are placed within six inches of the surface. Martin's ground, in the Borough, measures 295 feet in width and 379 in length. If we multiply these together, we shall make 111,805 superficial feet. If we allow 27 feet for the burial of an adult body, and divide this (the product) by that number, we shall obtain a quotient of 4,140 and a fraction. The vault is 118 feet long and 41 feet wide. If we take the main width of a coffin, or the space it will occupy, I think, speaking of adults, we shall be able to place on the surface 403 bodies. According to the best information I can obtain from a man that has worked there ten years, it appears that 14,000 dead bodies have been deposited in this ground and vaults during the time he has been there.

813. Can you say whether in your immediate neighbourhood there is any disease traceable to this cause?—Yes; and I shall prove, by a very intelligent witness, that he has known persons affected by this cause. They prepare graves in many grave-yards in London for 10 or 12 funerals on a Sunday, the day on which

which funerals mostly take place; there is the most unseemly haste during the time of the burying; I have seen a clergyman go hastily from one to another, reading the service at each; a number of mourners come depressed with grief; their power of resistance is weakened; they may not have eaten for some time previously; they breathe the gases given off, and have been seen to stagger both in the vaults and on the edge of the grave, and in many instances have, within a week, been deposited in the grave themselves.

814. You have mentioned the circumstance of burials taking place only six inches from the surface; from what cause is that; is it to save trouble?—It is frequently done to save trouble; but in many instances they cannot go lower.

815. Can you give any explanation of the reasons why the objectionable practice of burying only six inches deep is pursued?—I think it is adopted for two reasons; the first, in the instance I have referred to, that they cannot go deeper on account of the water; and the second, that it is done to save trouble. There is an utter disregard of consequences; and I know the working clergy are so careful not to breathe this air, that a direction has been given to the sexton to place the box at a considerable distance from the grave, so as to avoid it.

816. *Chairman.*] You have mentioned two sorts of gases, one sinking to the bottom, and the other rising up, and you stated that you considered that there was some animal matter floating in the gas?—In the compound mixture I have no doubt there is.

817. How do you distinguish the two gases?—There are several gases intermixed with an oleaginous compound; and I am quite certain there is an animal matter floating in that mixture; having passed a quantity of this through water, on one occasion, a pellicle arose; there is no doubt a very large portion of animal matter is present in a suspended form.

818. You form your conclusion from the greasy sort of matter found in the water?—Yes; the gas will be absorbed, to a certain degree, by the water, and this fatty matter will be found on the surface.

819. What is it that sinks to the bottom?—The carbonic acid and other gas; these are the gases which destroyed the men in Aldgate churchyard. If the man had been upon his guard, and held his breath during the time he endeavoured to render assistance, I do not think he would have died; but he unfortunately leant over the body of the dead man, inspired the gas, and fell down lifeless.

820. When was that circumstance?—In 1838.

821. Was not there a man who died at St. Margaret's church?—There was. I have had no communication with the surgeon who published the case; but I obtained the particulars from the Lancet of the 13th June 1840. They are the following: "William Green, a grave-digger, while employed in his vocation in the churchyard of St. Margaret's, Westminster, was suddenly seized with faintness, excessive chilliness, giddiness, and inability to move his limbs. He was seen to fall, removed home, and his usual medical attendant was sent for. The poor fellow's impression was, that 'he should never leave his bed alive; he was struck with death.' He was subsequently removed to the hospital, where he died in a few days. No hope was entertained, from the first, of his recovery. Mr. B., the medical attendant, was seized with precisely the same symptoms. He was attended by me; I apprehended from the first a fatal result; he died four days after the decease of the grave-digger. The fatal effects of this miasm did not end here; the servant was seized on the day after the death of her master, and she sank in a few days. There can be no doubt of the fact, that the effluvium from the grave was the cause of the death of these three individuals. The total inefficiency, in the three cases, of all remedial means, showed the great power of the virus, or miasm, over the animal economy, from the commencement of the attack. (signed) *J. C. Atkinson*, Surgeon, Romney-terrace, Westminster." It is well known that the Commissioners for the Improvement of Westminster, in the year 1814, reported to Parliament that the place could not be long used as a burying-ground, and yet they have continued to bury there ever since.

822. Is it only that gas which evaporates in air which you consider to be noxious to the population?—Undoubtedly the heavy gases also become diffused, are mixed with the atmosphere, and breathed by the dwellers in the locality or those passing by. In very many grave-yards they are obliged, when they dig deep graves (and in most instances they are compelled to do that), to throw

G. A. Walker, Esq.

6 April 1842.

down lighted straw, or paper, or shavings, or water to absorb the gases before they descend. Thus these gases are rarefied, driven up, and diffused in the atmosphere, and the next current of air may pass them into the street or into a house. There are many places I am acquainted with, in the vicinity of a grave-yard, where they cannot keep their windows open in warm weather.

823. Mr. *Denison.*] Can you give any instance of that?—Yes; in the neighbourhood of Portugal-street burying-ground, in the neighbourhood of St. Martin's-in-the-Fields, the Drury-lane burying-ground, and the one in Russell-court. I know an instance of a very respectable gentleman refusing to take a house in the neighbourhood of Bishopsgate churchyard, on account of its proximity to the grave-yard.

824. Can you state what effect the vicinity of the grave-yard has had on those who have lived near it?—There is no doubt it has had a great effect upon their health.

825. You state that in some instances they cannot open their windows; where does that circumstance occur?—In the neighbourhood of Portugal-street ground, and Drury-lane, and others.

826. Lord *Mahon.*] Have you attended patients living in those situations?—Yes.

827. Do you ascribe their illness to this circumstance?—The practice of medicine is not demonstrative. I attended an Irishman some few years ago; the action of his heart was accelerated, and his breathing short and laborious. I found he had been at a burial, and "had got a stink," as he called it. If the gases given off do not destroy life immediately, they act as a mechanical irritant to the lungs or the skin.

828. Mr. *Denison.*] How far from a burying-ground do you think these ill effects are felt?—It would be difficult if not impossible to state how far.

829. Viscount *Mahon.*] There is a different effect probably in summer and in winter?—Yes; it is worst in a moist atmosphere and an increased temperature; and there are several places used for burial which are very moist.

830. *Chairman.*] You consider that that is a great source of illness in the metropolis?—I do.

831. Do you think it is a leading cause?—It is difficult to say; that would require a great deal of statistical information.

832. Lord *Mahon.*] How many miles from a large town might a cemetery be placed with safety?—I think if a cemetery were on an elevation it might be placed at a small distance; but one thing should be attended to, that of placing the bodies sufficiently deep in the earth. With regard to the burials of the poor, it will be difficult to say how they should be provided for; but if we go upon the old system of putting 18 or 20 bodies in a grave, we shall leave a source of disease which may be acting for a long period. In Paris they have an excellent plan for the interment of the poor. The "fosses communes" of a cemetery are dug to a depth of four feet, the earth being thrown up on either side of the fosse for a considerable distance. The bodies are deposited side by side, but not one upon the other. The mortality of the day being received, the earth is thrown on the coffins thus deposited until the fosse is filled, when another place is dug and occupied in the same manner. This ground, if required, may with safety be again employed for burial after a period of five or seven years.

833. *Chairman.*] Your impression is, that wherever they open a grave in the grave-yards in this town, the opening it opens a volcano for the emission of those gases?—Unquestionably, I think that is one of the most injurious practices which can be followed. A most respectable gentleman with whom I was conversing the other day, a barrister, told me he had been affected for several days after attending a funeral, in consequence of the gas he inhaled.

834. Where was that funeral?—In the grave-yard in the Waterloo-road; it is a most improper place for a grave-yard, owing to the humidity of the soil.

835. Colonel *Fox.*] Do you believe the Neapolitan plan would answer; the having a vault for every day in the year?—No, I do not think the public would submit to that; I think the old Roman plan of burning would be preferable.

836. Mr. *Denison.*] Do you say that the plan of burying deep is objectionable?—I think the mode of burying in deep graves is highly objectionable on many points. I visited the grave-yard of St. Ann's, Soho, the other day, and I found they had a practice of keeping open graves; the coffins were covered with a little earth and a plank; there is thus a funnel for the gas to escape.

837. *Chairman.*]

837. *Chairman.*] Is that the reason you object to one coffin being placed on another, that you think the earth ought never to be opened where one coffin has been placed?—I think it ought not to be opened for some years. In the case of the poor, who must come under the protection of the Government or the parish, it would be desirable to make the most of the land, as I have before explained. I have examined upwards of 90 grave-yards, and am decidedly of opinion that coffins should be placed side by side, even as a matter of economy, and not as they are in Barbican and other places, where they have 20 or 25 bodies in one grave. We have had the old grave-yard of St. Clement's turned up within these few days, and given to the street; this was necessary, for the purpose of a sewer; the stench was abominable, though it is 40 years since that was used as a grave-yard; if that place had been opened in the summer, it might have produced an epidemic.

838. Colonel *Fox.*] Your objection to the Neapolitan plan would be that the feeling, you think, would be against it?—I think it would.

839. Might not that be obviated by doing it in a much more decent manner than it is done at Naples?—I think it might; the English are a very sensible people, and they might be brought to anything reasonable.

840. *Chairman.*] Can you explain the evidence of one of the witnesses, that in many of the dissenting chapels the speculators have made more by the dead than the living?—He is perfectly correct in that; there is no doubt many of those chapels have been established as speculations; I believe that many of them would not have been established, but for their being enabled to bury the dead.

841. Will you state how the profit is greater on the dead than the living?—I will take an instance of a chapel in my own neighbourhood, Enon Chapel; the number who have been buried there is very great, and many pounds a week taken for interment.

842. Mr. *Denison.*] You have stated that it would take seven years for a body in an ordinary coffin to be decomposed in the earth; do you mean that a common elm coffin takes that time to be destroyed?—No, if an elm coffin were to be placed in a moist ground it would last very many years. A French physician (Dr. Navier) has stated that, upon examining three bodies, one at seven, another 11, and another at 20 years after interment, he found them all in a state of active putrefaction. In vaults which are dry, in churches built in a dry sandy soil, and where abundance of ventilation is allowed, the bodies are like mummies.

843. *Chairman.*] Your impression is, that sites ought to be provided for grave-yards at a distance from London?—Unquestionably.

844. There has been mention made of a speculation by a man of the name of Martin, of a burying-place for the poor?—That is the place in the Borough of which I have given the measurement; I measured it the last Monday but one.

845. Sir *William Clay.*] Have you published any pamphlet on the subject of interments?—I have recently; and I published a book about two years ago.

846. *Chairman.*] You stated that you had attempted to get some of this gas, but was not able to analyze it to your wish?—I was obliged, in consequence of the intolerable stench, to pass it through water instead of through mercury, not having my process ready; I lost a great deal of it in consequence of that.

847. You say it differs from ordinary gases, inasmuch as there is animal matter suspended?—Yes, I believe that, because a pellicle floated on the surface; the first bubble which passed through water left a pellicle on the surface, and I was very glad to get rid of it. I was very ill, and kept my bed a week afterwards.

848. Can you form an idea how soon this gas generates after the burial?—I think it generates as soon as decomposition takes place, which will vary according to the disease.

849. You state that the whole of the churchyards in the metropolis are constantly generating this sort of gas, and that whenever a grave is opened it is the means of circulating this nauseous gas; how far do you imagine any injury may arise from the rain water filtering through those graves, and finding its way in that mode to the different wells which supply water to the population in this great town?—There is not a doubt the atmospheric pressure upon a grave-yard, which is equal to a weight of 2,160lbs. on every square foot of its surface, must affect it, and that the percolation will go on, and that, as water will find its level, the springs must be affected by that. You get rid of the suspended impurities in water by filtering, but you cannot of the dissolved ones.

G. A. Walker, Esq.

6 April 1842.

850. Assuming that this gas got mixed up with rain water, do you think it would go into the wells, and make the wells round grave-yards unhealthy?—I think it would.

851. Mr. *Ainsworth.*] Have you analyzed the water near any of those grave-yards?—No; but I am aware the pumps of some are not used.

852. Mr. *Denison.*] Do you know whether the water in the vicinity of grave-yards is unwholesome?—Water is a very powerful absorbent, and I think the wells near the grave-yards will be affected.

853. Do you know whether the pump-water near any grave-yard is affected?—I know that many of the pumps in the grave-yards are not used; that at St. Clement's, for instance, is not now used; that was dug close to the churchyard.

854. Do you know that the water from that pump near St. Clement's is not used because of its being affected?—I cannot say; I think it likely.

855. On a general principle, your opinion is that the rain water running into a grave-yard may be affected with those gases, and may pass into the wells used by the population?—I think there is no doubt of that, the gas and the animal compounds together.

856. Do you imagine that the water passing through the ground may imbibe some of the gas you have referred to?—Yes.

857. Colonel *Fox.*] Are you aware whether the grave-yards in the villages round London are equally bad?—There are some I have visited which are; I think they are too near, at any rate. As a general principle, I should say there has not been the slightest care taken or attention paid as to the nature of the soil for the purposes of inhumation.

858. *Chairman.*] According to your opinion, the grave-yards ought to be in a dry situation, rather on a hill?—Yes, as elevated as possible. A clayey soil I should think most unfit for the purposes of burial.

859. May there not be another objection to burying in damp low places, that if there is water, the water, in finding its level, might be found affected at the distance of half a mile?—I have no doubt of that.

860. Colonel *Fox.*] Are you acquainted with any other medical gentleman who has given the same attention to this subject as yourself?—I am not aware of any who have given the same attention to it as I have; I know that some gentlemen have paid great attention to it, particularly Mr. Baker of Leeds.

861. *Chairman.*] Will you have the kindness to state to the Committee what remedies may be suggested to remove those evils to which you have adverted?—I think that where health balances in one scale and interest in the other, it would be difficult to give an opinion. If I knew what course was proposed to be taken, I would give my opinion. The working clergy are entitled to their fees, and the question is how they are to be paid.

862. Mr. *Denison.*] You have given your opinion as a medical man of the mischiefs of the present plan; what in your opinion would be the remedy, as far as public health is concerned?—The remedy would be to take the bodies away to a considerable distance.

863. Mr. *Vernon.*] Are you acquainted with the rules established in foreign countries on these subjects?—There is not a body allowed to be buried in Paris, nor in the villages in many instances.

864. Are you aware of the law of the Pas-de-Vaud in Switzerland?—No.

865. *Chairman.*] What is your impression with regard to the distance of interments from inhabited places?—I think they ought to be placed at a considerable distance, and that there should be a law prohibiting houses being built in the neighbourhood of cemeteries. The great difficulty I see is the transmission of the poor; they cannot pay for it; they are frequently obliged to keep a body several days, in order to get the money to make a decent appearance at the funeral.

866. Where would you suggest that grave-yards ought to be placed?—I think they ought to be placed at a considerable distance, and certainly on elevated ground. I think the Tower Hamlets Cemetery is considerably too low and too near the river; that was recently consecrated by the Bishop of London.

867. Sir *William Clay.*] Do you know how near it is to the Thames?—Perhaps it is within three-quarters of a mile; it is very low, quite a flat; it is down by Mile End.

868. Are there not provisions in the Act for draining it?—I should think so; but contrasting that with Pere La Chaise, near Paris, there is no comparison.

869. Colonel

869. Colonel *Fox.*] The Kensall-Green Cemetery is well placed?—It is flanked by a canal, and here they follow the very objectionable practice of placing several bodies in one grave. The Highgate Cemetery is well situated.

870. Mr. *Ainsworth.*] Have you reason to suppose that the coffins would be buried in water at the Cemetery at Mile End, if they went to a considerable depth?—No, I am not aware that that would be the case; I know that the soil itself is not particularly moist; but it is not on an elevated situation.

871. *Chairman.*] Your opinion is that the site ought to be elevated?—Certainly; the gases ought to pass off with the currents of air.

872. Mr. *Vernon.*] What is your opinion as to the coffins employed?—I think there is a great deal of unnecessary expense as to coffins; that the French are wiser than we are; they seldom pay more than five or seven francs for a coffin. The public will perhaps think that they do a very clever thing in putting the body of their friend in a leaden coffin, but it is not the least protection.

873. An iron coffin would be a great protection from decomposition, but then it occupies the ground?—Yes; I think it would be very easy to provide for the middle and higher classes; but the difficulty is with respect to the poor. It must be done by parishes, unions of parishes, or by Government; then bodies might be conveyed by some mode.

874. Mr. *Ainsworth.*] Bodies are frequently conveyed two and three miles in country parishes?—Yes; but in London they can scarcely be prevailed on to bury a body for several days, and they make a point of attending the funeral.

875. Colonel *Fox.*] Would it be advantageous, in your opinion, to enact a law, by which a certain quantity of quicklime should be put into every coffin?—There is no doubt of the advantage of that to the health of the population; but I fear it would be objected to.

876. Mr. *Vernon.*] Is it on account of cheapness that elm is preferred for coffins?—No; the difference in price is so little between elm and deal, it is little more than a farthing a foot.

877. The elm is more durable, when in the ground, than deal?—Yes.

878. Therefore it would be desirable that deal should be substituted for the elm?—Yes; as light a coffin as possible, and on no account should they be placed in pits. Suppose a case where it is necessary to exhume a body for a judicial investigation, as happened at Chelsea in 1840: "A poor man died at a wretched hovel in Paradise-row, Chelsea, and was buried in the usual way by the parish. A judicial inquiry was instituted, and it was necessary to exhume the body; the grave-digger opened the hole, and after searching for some time, he declared his inability to find it. The coroner, Mr. Wakley, inquired of the summoning officer the precise number of bodies interred in the same pit. The officer replied, 'to the best of his recollection, there were 26 bodies.' The coroner wished to be informed if they rammed them in with a rammer. The officer said he 'was not aware that they resorted to such a process, but the bodies of paupers were packed together as closely as possible, in order to make the most of the space!' The coroner observed, that such a system of burial was revolting to humanity, and reflected the highest disgrace on a Christian country."

879. Mr. *Denison.*] What wood is the cheap French coffin made of?—I think it is made of the pine. It is exceedingly similar to an orange-chest, in the form of a roof at the top. The city mark is placed upon it. I think there are from five to seven francs paid for the common coffins there.

880. *Chairman.*] From what you have stated of the generation of gas, must not great injury arise from keeping the bodies so long before burial?—Yes, I have known many instances; one I will mention. I attended a lady and her two daughters. A woman died of typhus fever; the lady, who was short-sighted, went up stairs and put her head down to read the inscription on the plate. Her daughters did the same, and the whole of them were affected; the two daughters had typhoid fever, and she was herself delirious.

881. How could the gas escape?—There might be a hole made to tap the coffin. I have known a leaden coffin burst before it was taken out; they bore a hole in the coffin, and call "look out," and they go away while it is tapped; but it is a most injurious practice to keep bodies so long in a confined neighbourhood.

882. Mr. *Ainsworth.*] The moment decomposition takes place gaseous matter escapes?—Yes. I think a body ought, in many instances, to be buried within 36 hours of the death; but we have no power of enforcing that. I have seen

G. A. Walker, Esq.

6 April 1842.

families living and eating and drinking in the same room in which the body was placed, and receiving great injury in consequence.

883. Sir *William Clay.*] You find a strong feeling against interment shortly after death?—Yes. I do not think that a rapid change could be effected in that; it may be necessary in particular disorders.

884. Does not that feeling arise, in some instances, from a fear that by early interment after death, a person might be buried before he was actually dead?—Yes, there is a mixed feeling; there is a great deal of profession, and there is great deal of reality.

885. Mr. *Denison.*] If a person dies by an infectious disorder, how soon after death do you think mischievous consequences might arise?—It is very difficult to say. A very talented man, Dr. Armstrong, states that a "medical man came from Scotland labouring under consumption, and consulted my friend Dr. James Johnson and myself. The history of his case was this: he made a dissection of the body of a lady who died consumptive, and being short-sighted he held his eyes, and consequently his mouth, near the lungs during the examination. He felt a disagreeable stench, which he could not get rid of; and that very night a cough arose, which never left him from that time till he came to London, and then he was certainly in a state of confirmed consumption. One solitary case would not be sufficient proof, but I have seen others bearing upon the same point, which incline me to conceive that the odour of matter in the lungs of an individual who is consumptive operates either as a specific poison, or as a local irritant, I do not know which, and excites consumption in those who are predisposed to it."—Practice of Physic, p. 779.

886. How long had that body been kept?—That I cannot answer.

887. Sir *William Clay.*] What length of time, after apparent death, would be sufficient to render impossible the chance of a person being buried before death had really taken place?—I think a surgeon would be the best person to determine that. There ought to be a medical police.

888. For what period of time do you think it might be doubtful whether a person was really dead?—I cannot state; circumstances are so different.

889. Unless a time could be defined, how could an enactment be made?—I think a general enactment might be made.

890. Mr. *Vernon.*] Do you think it desirable that some public functionary should visit every corpse before the funeral takes place?—Yes. In France, and in other parts of the Continent, a medical man visits and gives a certificate. I think there might be a central Board; prevention would be better than cure.

891. Sir *William Clay.*] Supposing there were some legislative enactment, limiting the time within which a body should be buried, is it not still desirable there should be a provision for a medical man seeing every body before it is buried?—Yes.

892. *Chairman.*] You cannot exactly determine when the gases will be injurious?—That is very difficult.

893. Are the gases arising from a human being more injurious to human life than those arising from other animal decomposition?—I do not know whether I am prepared to state an opinion upon that subject. I think it is extremely probable that the specific disease of which the person may have died may produce a specific effect, in some instances, on the living. We find the bodies of persons who have died of scarlet fever and small-pox, and so on, are sometimes kept a considerable time, and afterwards buried within a few inches of the surface. I cannot say whether the effluvia of those bodies might not be more injurious than from any others.

894. Mr. *Vernon.*] Independent of the gases, which are the immediate cause of the extinction of life, will there not remain other gases which may be equally the cause of dangerous disease?—I have no doubt of it, highly irritant to the lungs or the skin; the 800th part of sulphuretted hydrogen is sufficient to kill a dog. I have no doubt of the evil effects of the mode in which the dead are disposed of all over the country, for it is the same in all the principal towns; there are annually burials of large quantities of bodies placed in one grave, some in lead. They are diffusing their products night and day, and I have no doubt this is a very exciting cause of consumption in this country.

895. It is, in your opinion, a popular error, that when a test is applied of a candle which burns, or when an individual can continue for a space of time to breathe the gas, injurious consequences will not ensue?—Certainly, that is the

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test of the grave-digger; but if they were not accustomed to their office they could not get on; there is not a single man I have examined who has not been affected more or less. *G. A. Walker*, Esq. 6 April 1842.

896. Mr. *Vernon.*] The quicklime will neutralize the carbonic acid gas; for the purpose of neutralizing other gases, the chloride of lime would be best, would it not?—It would.

897. Is there any possibility of suggesting the introduction into the coffins of either of those; might it not be introduced without appearing offensive to the lower orders, under the guise of its being a valuable antidote to the putrefying gas; and might it not at the same time accelerate decomposition, and render it less pernicious?—There is no doubt that it would have a good effect; but I think the accomplishing of it must be a work of time.

898. You are aware the Legislature ordered that all bodies shall be buried in woollen; if an enactment were made for a certain portion of chloride of lime to be introduced, do you see any reasonable objection to that?—I see no objection to it, except that arising from the feeling of the people, which I believe would be against it. I can see nothing that can be done but a compulsory power of burying early, and taking them out of town; it would not be worth the while of some parishes, such as St. Mary-le-Strand, to make a distinct cemetery. If land of little value were bought there might be branch railways made to the ground.

899. You are understood to be of opinion that all funerals indiscriminately, from the highest to the lowest, should be taken under the authority of Government?—Yes; I would not allow the parish authorities to have anything to do with it.

900. Do the Irish in your neighbourhood continue the wakes?—Yes, and they get exceedingly intoxicated frequently.

901. Perhaps the delay in the burial may arise frequently from their being destitute of the funds for the wakes?—There is no doubt of that.

902. Sir *William Clay.*] What is the form of disease which you consider the gas to which you have referred most likely to produce?—I think it is difficult to specify the disease. I have seen typhoid fever produced by that exhalation; the pulse rapid, breathing exceedingly hurried. The boy to whom I refer had been working in the neighbourhood of a person who had died of putrid fever.

903. Do you conceive the gas generated by putrid bodies may become the source of disease, which disease may spread independently of the first cause?—There is no doubt of that.

904. You mean to say that the gas arising from putrid bodies may generate typhoid fever, which under certain circumstances might spread naturally, and continue that disease, independently of the cause to which death owed its first existence?—Yes, by contagion; but that is a disputed point. It becomes the centre of a fresh disease.

905. You conceive that a very widely spread and fatal epidemic might owe its origin to a single instance of the exposure of a putrid body?—Yes; there must be some predisposing cause. I have collected a number of cases. Dr. Prout states that previous to the invasion of the cholera, the atmosphere was specifically heavier. He noticed ordinary diseases disappear, and there was an unusual deposit of urine; and he was of opinion there was a species of gas floating in the air.

The Reverend *Henry John Knapp*, D. D. called in; and Examined.

906. *Chairman.*] DO you reside in London?—I occupy part of a house in London, but I am Vicar of Willesden. Rev. *H. J. Knapp*, D.D.

907. Will you have the kindness to state to the Committee your impressions with regard to the interment in towns?—Perhaps, in order to give a regular and clear idea on the subject, I may be permitted to enter a little more into detail. I happened to be for 27 years the curate of a parish in the City, which was St. Andrew Undershaft in St. Mary Axe, and from the commencement of my being the curate to the very last period when I ceased to be so, my attention was constantly drawn to the distressing state of the churchyard of St. Andrew Undershaft. I have had, of course, very many opportunities of observing the accumulated mass of bodies and matter decomposed and in a putrescent state, with abominable exhalations, to the annoyance frequently of myself performing the duty, and of those attending the funeral.

908. Has it come under your observation that those exhalations have been injurious

Re
H. J. Knapp, D.D.

6 April 1842.

rious to the health of individuals?—I have no doubt that they have been. I occupied the rectory-house during the latter part of the time I held the curacy, and my health was always indifferent, so much so, that having an opportunity of asking the Dean and Chapter of St. Paul's, of which I am sub-dean, to exchange the living, my friends, the faculty, recommended me to leave town if I wished to save my life, for that I could not, with any regard to safety and prudence, continue in that neighbourhood. Some of the windows of the rectory-house looked over the churchyard, and, especially in the summer time, we could not bear them open. The exhalations were disagreeable, and the lower part of the house was filled by them; and frequently when performing a funeral, I was obliged to stand at a distance from the grave, the exhalation was so very disagreeable. I may be permitted to enter into another circumstance; there is a vault now under the vestry; the opening to that vault was from the church. When first I was there, and whenever that vault was opened, the greatest stench pervaded the whole of the church. Frequently on Sunday when service was performed, several persons left the church attacked by sickness; and when I have gone down into that vault, it was most oppressive. Now they have an opening from the churchyard, but still I have often observed, that notwithstanding that, when I have been in the vestry, the exhalation from underneath came up so as to be very disagreeable.

909. This occasioned you to give up the situation you held there?—Yes; I gave up a curacy of 200*l.* a year to take a small living which is very inferior to it.

910. As far as your observation goes, you are of opinion this exhalation arising from dead bodies is most injurious to health?—Yes; I have been often told by persons having houses contiguous to the churchyard, that at times they could not open their windows or doors that looked into the churchyard.

911. Do you consider that the houses of the inhabitants in the vicinity of the churchyard were more unhealthy than others?—I apprehend they were more or less affected; I can speak more specially with regard to myself. I was there in the time of the cholera; and, I would observe, it prevailed very much in St. Mary Axe. I recollect on one occasion, when I had to bury two children, and the husband and wife, the uppermost coffin was only a foot or a foot and a half from the surface.

912. What was the reason of placing it so near the surface?—There was no room in the churchyard; wherever they probed, they probed through coffins; and you cannot dig anywhere without digging up bones.

913. They could scarcely make a grave without digging up some coffins?—No. You go up steps to the churchyard; it stands three or four feet above the level of the church, raised by the bodies; they have been obliged to dig holes behind the church, to deposit the bones which are perpetually thrown up on the surface, to put them out of sight.

914. What was the description of disorder which you consider as occasioned in your case by this effluvia?—I was subject to colds and cough, and in the winter very much so, and in the summer to a feverish feeling and a pleurisy in my side; and at one time was in very great danger of my life.

915. Mr. *Beckett.*] Had you any sickness?—Yes, very frequently. The bishop having given me the rectory-house, I was obliged to reside there, and I was very glad of an opportunity to get out of town.

916. Mr. *Vernon.*] Have you known of instances in your congregation, of ladies who have been indisposed during the performance of Divine service?—Yes, especially immediately after the opening of the vault from the church.

917. Was it a common thing to occur during the performance of Divine service that ladies have been ill?—I have observed several instances of it. I recollect some instances where they have had brick graves in the church, fresh vaults made; and I have observed some disagreeable exhalations arise, and prevail for several days.

918. Sir *William Clay.*] Where excavations were made in the ground under the church?—Yes. In the church itself there is a vault underneath the vestry, and the rector's vault underneath the altar. I have known a great quantity of the contents of that vault taken away; I have heard that 10 tons of lead have been taken out of that vault.

919. *Chairman.*] Do you mean that the bodies were left naked?—The bones, I understand, were removed to the charnel-house. Another instance I recollect, which I observed myself when performing a funeral for a friend of mine, the

curate

Rev. *H. J. Knapp*, D.D.

6 April 1842.

curate of Bishopsgate church; I recollect it was in a hot summer's day, the body was placed within a very short space of the surface, I perceived a most disagreeable stench.

920. Mr. *Vernon.*] Do you know the reason the churchyard was not extended commensurately to the wants of the parish?—On account of the buildings near it.

921. Was there any application made to purchase fresh land for the purpose?—Not that I am aware of; they have but a very small churchyard.

922. There was no proposition in the vestry to enlarge the churchyard during the period of your curacy?—No, not that I am aware of.

923. Is there any other information you can give to the Committee?—I can communicate the ideas which have occurred to me on the subject of a remedy. The advantages which have already accrued from the cemeteries have been materially felt about London, especially the crowded parts of London. Mr. Walker has very properly said, the further you get the cemeteries the better; and I am of opinion that the cemeteries now so very near London, and which are beginning to be built round, will soon become too near, and I should consider the distance should not be less than four or five miles.

924. How would you defray the expense?—The circumstance of the removal of the poor calls on the principal Members of the Legislature, and different individuals who turn their thoughts to the subject, to consider and point out the best remedy. The parishes themselves pay for the expense of the burial of the poor; therefore, it appears to me that a small rate, even a penny in the pound on the rental, would amply provide for the additional expense; and there is in almost all parishes parish property, parish houses, sometimes parish lands, devised to the support or comfort of the poor; if those were converted, or a portion of their produce were devoted to the purchase of land, there would not be a material addition to the expense. Some of them make a very fair profit from property in lands both in and out of town.

925. Would not the principal objection arise from the difficulty of the relatives attending the funeral rites?—I think that is probably the case; but a light carriage might be provided, to take the body as well as the mourners, at a comparatively small expense, especially if they contract for it.

926. Which might be done, if the public administration were to take the conduct of it?—Yes, that would afford increased opportunities for doing it.

927. Colonel *Acton.*] Would the friends be satisfied, if they were subjected to the increased expense?—There might be some demur on their part; but almost all with whom I have conversed on the subject admit the existence of the nuisance, and express their extreme anxiety and most earnest wish that the evil should be remedied and the nuisance removed; and if there was a legislative enactment to compel burying out of the cities, they must provide means to bury the poor in more distant places. With regard to another subject, if I might touch upon it, that is, the remuneration of the clergy, I am sure many of them would be very glad to give up some of their rights for the sake of the health of the metropolis. In some instances they form the principal income of the clergyman; but it would be for Parliament to consider how far they would allow the whole of them to be provided for, or to make some remuneration, considering that if the funerals were removed out of town, the duties of course of the assistant clergy in the parishes would be lessened.

928. The clergy are now paid so much for each interment?—Yes.

929. If a remote place were fixed upon for the funerals, might not the clergy still perform the duty?—Yes; and in the cemeteries which have been established they receive a payment. At Kensal Green cemetery there is 5*s.* for a vault funeral to the clergyman of the parish, and 18*d.* for a common grave funeral.

930. Has it occurred under your observation that any graves have been disturbed shortly after interment for the sake of the lead or the wood of the coffins?—I cannot speak to that point in the parish with which I was conversant.

931. To your certain knowledge that quantity of lead you have mentioned was taken out?—Yes; I had it from good authority.

932. From whose authority?—By the clerk himself.

933. To whose use was the money applied?—It was paid over to the churchwardens.

Rev. *H. J. Knapp*, D.D.

6 April 1842.

934. You think the clergy would be rather favourable to getting rid of burials in London?—I think they would, for they are all aware of the nuisance.

935. *Chairman.*] There is a probability in some parishes of their incomes being materially diminished?—Very materially in some parishes.

936. Take a central parish in the metropolis; how would you suggest that compensation should be made to the clergy for the loss of fees?—Compensation, it appears to me, might be made from a small rate on the rental; it has been suggested to me that a penny in the pound on the rental would pay all the extra expense; the clergy of course would expect compensation out of that.

937. Would this penny in the pound be sufficient to pay the extra expenses of burying the poor elsewhere, and of remunerating the clergyman?—I think it would in many instances.

938. Do you think that an assessment for such a purpose would be unpopular?—I cannot say what might be the feeling of the parishes; it would be a very great object in some small parishes; a penny in the pound would barely remunerate the clergy in large parishes; it would be immensely productive if the larger parishes were put with the smaller ones; a very good average might be obtained.

939. Are there any other facts that have fallen within your notice?—In St. Martin's, Ludgate, they have no churchyard, only a vault, and last summer they carted away ten cart loads of decomposed earth to make room for others.

940. Human matter, in fact?—Yes, I apprehend so, and the clerk himself was so fearful that his wife and her father and mother should be taken out of their coffins, that he was at an expense I believe of ten pounds in putting additional coffins to prevent them being removed.

941. This mode of burying in churchyards must be a great temptation to breaking the laws of the country by thefts?—I am afraid it is.

942. Is it your impression, from your extensive knowledge of the metropolis, that the custom of taking away the coffins and lead is general?—I have had no opportunities of judging generally; I can only speak as to parishes where I have been an eye-witness of the evils of the present state of things.

Jovis, 7° die Aprilis, 1842.

MEMBERS PRESENT.

Colonel Acton.	Sir R. H. Inglis.
Mr. Ainsworth.	Mr. Vernon.
Lord Ashley.	

W. A. MACKINNON, Esq. IN THE CHAIR.

Valentine Haycock called in; and Examined.

Valentine Haycock.

7 April 1842.

943. *Chairman.*] WHERE do you reside?—No. 4, County Terrace-street, New Kent Road.

944. What is your occupation?—I am a grave-digger at present.

945. Are you connected in any way with any of the new cemeteries which have been established about London?—Not at all.

946. Where are you grave-digger now?—At the New Bunhill Fields burial-ground, in Devereux-street, Great Dover-road.

947. How long have you been employed in that situation?—Ten years.

948. During that period what number of persons have been interred to your knowledge?—During the time I have been there I understand from the minister about 14,000.

949. What may be the extent of the ground?—Certainly it is a small place, but I have not noticed the size.

950. Is it an acre or half an acre?—I might perhaps ascertain, but I have not taken notice of that; it is certainly a small ground, but there is more to take in when it is full, they tell me.

951. As far as you can judge, what may be the size of it?—It might be about an acre; I should think it was, or it might be a trifle more or less.

952. What number may you have buried in one day?—The most I ever buried in one day was 46.

953. Is this burial-ground full, or is it capable of receiving any more, or what is the state of it?—I should say very full, except a little bit of new ground there is yet to fill, but what is filled is quite full.

954. Do you say that 14,000 have been buried there?—So I understood from the minister; I asked him how many I had buried there myself, and he told me about 14,000.

955. Is that your own belief?—I should say that is about it.

956. Were there many buried there before those ten years?—It had been a burial-ground about eight years before I came there.

957. That would be about 18 years altogether?—Yes.

958. As far as you can form an estimate, what is the number that have been buried there before you came?—I should say about half the quantity that I have buried; I should think it amounts altogether to about 20,000 or 21,000.

959. Mr. *Ainsworth.*] The burial-ground you are speaking of is the burial-ground called Martin's Burial-ground?—Yes.

960. *Chairman.*] What has been the yearly average of burials?—About 1,400.

961. To the best of your belief there may be now about 20,000 to 21,000 buried there?—Yes, according to what I understand from the minister.

962. Will you explain how you can place 20,000 or 21,000 coffins in an acre of ground?—First of all we dig 10 feet, and if we can go 12 we do, and then we pile them one upon the other, as many as the grave will hold, perhaps six or eight or nine in it; then when that is full we dig another grave close by the side of it, and put another nine or ten.

963. Mr. *Ainsworth.*] It is regularly walled up?—Yes, as if you were piling up brick; that is the way I understand that all grounds in London are done.

964. Sir *R. H. Inglis.*] Does the evidence which you have just been giving to the Committee refer to the grave-yard opened as a private speculation by Messrs. Hoole & Martin in the New Kent-road (Answer 458)?—That is the same one I am now speaking of.

965. *Chairman.*] When you dig deep, does the ground improve, or how is it; is it wet or is it dry?—Very wet; when we get to the bottom, clay and water gets in, and stuff that runs from the coffins.

966. When you dig to what depth?—About nine or ten feet.

967. Have you ever found an unpleasant smell?—Dreadful beyond all smells; there is nothing to exceed it.

968. Do you consider that smell to be injurious to health?—I should think very much so; it is to mine, I am satisfied.

969. Have you yourself enjoyed good health?—Not while I have been there, but I never knew what it was to have a day's illness before I came there; I had always been used to the country, but I lived two years with a gentleman in London before I came to this employment.

970. Mr. *Ainsworth.*] What was the state of your health then?—Very good indeed.

971. You have been 10 years a grave-digger?—Yes; I have been laid up at different times.

972. How soon did you find after you commenced the business of grave-digging that your health was affected?—When I first came there, for several weeks I could scarcely eat anything; I fancied it was very offensive, which I know it was; I had no taste for my food.

973. Has that continued?—I have certainly got the better of it a little; I have got more hardened into it, but I am never so well as I used to be.

974. *Chairman.*] What has been the health of your family; has it been good since they came to that neighbourhood?—My family now live further away from the burial-ground.

975. But when they lived in the neighbourhood, was their health good?—No; not at all; we were always having one room which we called our hospital, one or other always ill.

976. Were they in good health before?—Yes, they were.

977. Do you attribute their illness to the effluvia from the grave-yard?—Yes, I do.

 978. Then

Valentine Haycock.

7 April 1842.

978. Then you consider that to be very unhealthy?—I do; very unhealthy.

979. To what extent round the grave-yard do you suppose the unhealthiness extends; that is to say, at what distance from the grave-yard would it injure people living there?—I can only say that in houses round the burial-ground they seldom stop long; they seem to say that it affects their health, and they are generally going away; the houses are always being to let, and there are complaints being made.

980. And in your own experience you found your family and yourself in a bad state of health when you lived there?—Yes; at different times I felt it very much.

981. Have you known any instances of persons affected in their health who attended funerals of their relations?—I have known them follow their friends on one Sunday, and brought themselves the next, which I expect was through there being so many graves opened. From seeing the way in which they were taken, I supposed it was through the gas from the graves and the stench.

982. From what you have observed, did this cause any particular disease, or was it merely inhaling of the gas?—Almost sudden death to them: I have known a cab to be sent for to take them home, and the undertakers have said, "Dear me, the poor creature followed a friend here last Sunday, and I am come to bury them this, and they followed as well as I followed myself;" and therefore I thought it must be from their having so many graves opened; sometimes 40 graves opened, and some very disagreeable, some better and some worse; I thought the ground must affect them.

983. Has this often happened?—I do not say that it has happened very lately; it happened at the time of the influenza and the cholera, when we used to have such a quantity of graves opened at once.

984. In this observation of yours, do you refer to the bodies interred under the chapel or in the burying-ground?—I should say from both of them; one was as bad as the other at times; but the vault now is much sweeter than it used to be; we bury so few there now, they are all in the ground.

985. Mr. *Ainsworth.*] What is the cause of their burying so few in the vault; is it full?—No, it is not full, it will hold a great many more.

986. *Chairman.*] When you have been digging yourself, have you felt yourself affected immediately?—Yes; I have been obliged to get up in the best way I could, and I have been in a tremble that I did not know whether I was going to die myself or not; I have gone in-doors and have sat a little time to recover myself; I have had something from the doctor to bring me round again.

987. Have you ever found it induce you to have recourse to spirits?—Yes; I have been obliged to get a little drop of brandy; I am no great drinker, a very poor drinker, but I have been obliged to do that.

988. Mr. *Ainsworth.*] Have you received relief from that?—I cannot say but what I have; it has brought me round; I have been so in my throat, that I could not speak; no moisture through the stench.

989. Do you find your throat much affected?—Yes; when we got down deep, there the runnings from the other coffins are sometimes the colour of blood itself, and the stench is beyond anything. When people come into the ground, (I do not speak of our own particularly, but I speak of others, because the church-grounds are fuller than this), I have known people come in and stand over a grave, and put their handkerchiefs to their mouths, and they have gone away, I have seen no more of them; it has completely sent them away.

990. *Chairman.*] In what way have you felt yourself affected; did you feel a pain in your throat or in your limbs?—I was all of a tremble all over, as if I was going to be knocked down at once; in fact, if I had not got up to the fresh air, and got away, I have been so that I could not have got up at all.

991. Sir *R. H. Inglis.*] You have referred in your evidence to your ground, and you have said that other grounds were as bad as yours; will you specify to the Committee what other grounds are those to which you refer?—I should say the ground of St. Mary, Newington, and of Bermondsey Old Church, which is by Tooley-street, are much worse than ours. I have been there as bearer, and I have seen things there much worse.

992. *Chairman.*] You speak from your own knowledge?—Yes.

993. Sir *R. H. Inglis.*] The churchyards of those parishes are in a condition as bad as that as to which you have been examined?—Much worse than ours I am satisfied, because they are a great deal fuller.

994. Have

994. Have you ever attended any funeral in either of those churchyards?—Yes, several times.

995. You have stated that you have attended as bearer; have you ever attended as grave-digger?—Not as grave-digger. I have worked at no other ground than this as grave-digger, but I have been there and seen the grave-diggers, and we all know one another.

996. *Chairman.*] You speak from your own experience?—Yes, I do.

997. With regard to the sensations you have experienced when you were opening a grave, did you feel a taste in your mouth or a sensation in your throat?—In my throat, it was completely dried up with the stench, it is so sharp upon you, so that I have got up and heaved, and actually brought blood up before anything else would come, and I have been obliged to go in-doors and get a little brandy.

998. Some of the witnesses have said that they have felt an unpleasant taste in their mouths a considerable time after; have you felt that?—Yes, I have.

999. Have you known other grave-diggers or other persons affected in the same way?—I do not know that I have; I am not with them much, only when we meet; I merely see them sometimes as I go along and look round amongst them.

1000. Can you say whether, generally speaking, their occupation induces them to have recourse to spirituous liquors; are they generally a sober set?—It is very seldom they are; but if it wasn't for the drink I do not believe they would live so long as they do; I think the drink overcomes it.

1001. Does the sensation, after this effluvia has been inhaled, affect the stomach?—Yes, it makes you so that you cannot eat; it makes you ill, sometimes sickly.

1002. Does it affect the bowels like medicine?—After you take a little drop of brandy, it comes from you the very same smell as you get into your throat, so that you cannot bear yourself.

1003. Then you think that what you inhale goes through you?—I am satisfied it does.

1004. Sir *R. H. Inglis.*] In reference to what you have called your own ground, namely, Hoole & Martin's ground, do you know anything of the pecuniary concerns of the place; who has paid you?—Mr. Martin has paid me.

1005. Who inters the body?—Mr. Thomas Jenner is the minister.

1006. Of what persuasion?—I think he is a Dissenter.

1007. Of what denomination of Dissenters?—I cannot say.

1008. Is the ground, or are the vaults, open to persons of all persuasions?—Yes, there is the Church service read over.

1009. By whom?—By Thomas Jenner, the person that always attends; ever since I have been there he has been there.

1010. Has he anything to do with the service on the Sundays?—No; he only reads the service on the ground.

1011. By whom is he employed?—Mr. Martin employs him.

1012. Mr. *Ainsworth.*] Is he a minister of the Church of England?—No.

1013. Do you know what his fees are?—He has 20*l.* a year.

1014. Has he a salary?—Nothing but that; he lives close by; he is a patten-maker, so it suits him very well.

1015. The fees go to Hoole & Martin?—Yes.

1016. Sir *R. H. Inglis.*] Do you know what the fees are?—Eleven shillings for a grown person, and 6*s.* for a child; and, in a vault, 1*l.* 10*s.* for a grown person, and 12*s.* for a child.

1017. *Chairman.*] Has the ground risen in that yard since you have been there?—I rose it myself, about six inches; all over the place.

1018. Above the level of the circumjacent ground?—Yes.

1019. In what state is the vault?—It is a great deal better than it used to be; it is so well ventilated for the air to get out, we bury so few now, and what are in have been in so long that they have got dry.

1020. Who established this ground?—Mr. Hoole.

1021. Did he assist in cleansing the place?—I understand he did at one time assist a little in that way, because at one time bodies used to be put in for 1*l.*, to stop in six months; then there were a great many that would have to be taken out all at once, to be buried in a hole, and I believe Mr. Hoole assisted in getting them out.

Valentine Haycock.

7 April 1842.

1022. Did he experience any bad effects from that?—I understood from one of the neighbours, that she thought that that carried him off quicker than he would have gone.

1023. Did he die shortly after he assisted in that?—So I understood, but I was not in town at that time; I lived in the country.

1024. Did he try to guard himself by putting anything over his face?—He was asthmatical, and had been so for some years.

1025. What age was he when he died?—I think 55.

1026. If this employment is so unhealthy, what is the reason you remain in it?—I am going to leave it, and if I could have got any other employment, I should have wished to leave it long before this; my wife has said to me, "You are always ill, why do not you leave it?"

1027. What salary do you get?—Eighteen shillings a-week, and then of course there is a little what we call pickings-up, perquisites.

1028. Still you would give up the situation if you could get anything else?—If I could get anything with half the money; my wife has been making home-baked bread, and we now find that we have got enough, so that by persevering a little we shall be able to get our living, so that I am about to leave in a fortnight or so.

1029. From a conviction in your mind of the unhealthiness of the occupation?—Yes; I am never well.

1030. Besides your salary, have you any objection to state what perquisites there may be?—Perhaps it may be 10*s.* a week.

1031. Making altogether 28*s.*?—Yes.

1032. In what way do they arise?—The undertaker when he comes gives the grave-digger sixpence; some will give a shilling; that is what we call a drop of beer.

1033. The average pay of your situation you state to be about 28*s.* a week?—Yes, the year round.

1034. And yet you are so convinced of the insalubrity of the employment, that you would give it up for half the amount?—Yes, I would gladly do so.

1035. Colonel *Acton.*] Your perquisites consist of money?—Yes; there are no other perquisites but what the undertakers give you; sixpence or a shilling for all that come; it is looked for among the grave-diggers.

1036. *Chairman.*] You consider that your health has been a good deal injured by this employment?—People that knew me when I first came, say, "Why do not you leave it? it is killing you an inch at a time;" but I never used to complain more than I could help, but I never was well.

1037. You do not think that any constitution can be seasoned to it?—No; it is impossible.

1038. In what way do you think it affects your health; is it chiefly by inhaling this gas?—Yes; I should say it was the bad smell; you have never got the same appetite to eat as others have at other employments.

1039. Mr. *Ainsworth.*] Have you found that for the last two or three years your health has materially changed for the worse?—Yes; I do not feel well at all.

1040. Do you feel worse from having continued so long, or are you much the same?—I am much the same; sometimes worse and sometimes a little better; when we are very busy and have got a great deal to do, we have more of the gas.

1041. *Chairman.*] The Committee have been informed that a grave-digger cut his finger with a spade in some churchyard; can you state the circumstances of that to the Committee?—He cut his finger with a knife, in eating a bit of pork for his breakfast; he merely broke the skin; he had occasion to dig a 10-foot child's grave on that day; he did not bind this cut up, and he got some of the dirt and stuff in from the grave, and it poisoned his finger; from that it swelled, and his arm ached to that degree, I believe, that it caused his death; he died of running abscesses all over him.

1042. And you think that it was this poisoned earth which did it?—It is but two days ago that I spoke to a stonemason about it, who took in a stone the very afternoon of the day that he dug that grave, and he said that he believed it was the last shilling he had upon the ground; he said that he had cut his finger, and he had got some stuff in from the ground, and his arm ached so that he did not know what to do with it; he went home that evening and went to bed, and I believe he did not get up again to go to work.

1043. Sir

Valentine Haycock.

7 April 1842.

1043. Sir *R. H. Inglis.*] Was this in the grave-yard to which you are immediately attached?—No, it was in S. George's churchyard.

1044. *Chairman.*] Have you anything more to state to the Committee upon the subject upon which you have been examined?—I have not had time to look round, or perhaps I might get more information.

1045. Mr. *Ainsworth.*] Do you know of any grave-diggers who have died prematurely in consequence of their employment?—No, I cannot say that I do, except this one I have mentioned.

Bartholomew Lyons, called in; and Examined.

B. Lyons.

1046. *Chairman.*] WHAT are you?—A Grave-digger at St. Ann's, Soho.

1047. How long have you been there?—This last time I have been two years.

1048. What situation were you in before?—I began at St. Martin's-in-the-Fields; I was there off and on about 24 years.

1049. During the time you had been employed in St. Martin's, have you removed a great number of bodies?—I have; I have moved the whole from beginning to end with help.

1050. Where have you removed them to?—Those that could not be moved anywhere else we moved to the catacombs.

1051. Where are the catacombs?—On the left-hand side of the church.

1052. At the time you made those removals did you feel yourself at all affected in health?—I did twice; what we term a little of the foul air.

1053. How did it affect you?—I felt in the way just as a person that is intoxicated with liquor, when you first feel anything of it; it comes by degrees; the further you go down, the more it catches hold of you, and it comes with a bitter twang, a kind of a coppery taste in your mouth, and if you go too far it will catch hold of you, so that you will have no power at all, and it has made me sick two or three times.

1054. It has made you sick to vomit?—Yes, that is what I mean.

1055. What did you take to cure you?—I have had for the present, till I got home, a little drop of brandy, which has revived me so far as to be able to continue the work.

1056. Does this always occur to you when you go deep?—Yes; I have had graves 21 feet deep where I now work; I have got one grave now with three bodies in it; it is 21 feet from the commencement of it, and after I have got out a few hours and leave it open, the foul air will get in; it is 17 feet deep now.

1057. Mr. *Ainsworth.*] Is the grave kept open?—It is not exactly open, there is about three feet of earth on the top of the coffins, and then it is covered over by boards, and then so much earth on the top of the boards.

1058. So that every time a body comes you open the three feet and deposit the coffin?—Yes, according to the size of the coffin, if it will go down.

1059. Sir *R. H. Inglis.*] Whereabout is this burial-place?—The best way to go from here is to cross Seven Dials and through Church-street, and the church faces you; it is a very large church.

1060. *Chairman.*] What is the custom that you adopt in digging graves?—These 20-feet graves are allowed by the board of vestry, and on purpose to make the ground last the longer, every fresh grave is to be sunk 20 or 21 feet, if we can get 21; we get it till we come to water, and then we cannot get any further. If we meet with any other coffin that cannot be removed, we never touch it; but otherwise timber that has been down from 40 to 50 years, with nothing in it except the bones, we remove.

1061. You remove everything that is not sound?—It is all decayed, the bones and all, they have nothing on them, and we sometimes break up the old coffins.

1062. What do you do with the mass?—The bones we put in a bone-hole.

1063. What do you do with the coffins?—We take that to the place where they steam the church, and burn the wood.

1064. Who burns it?—The beadle burns it, I believe, what we do have.

1065. What quantity do you get up in a week?—Where we dig one of these graves, we may have three or four barrow-fulls; that is where we have to dig a 20-foot grave; but there may be some graves where the coffins are decayed, and nothing in them but the bones, and then we may have had a dozen barrows-full, and that is chucked down to where the steaming place is, and the beadle burns them.

B. Lyons.

7 April 1842.

1066. How do you manage, when you descend one of these deep graves, to avoid what you have stated affects you so much?—First we put down a long ladder, 20 feet 6 inches long, and I go down first myself; I go down as far as I can to see if I feel anything of the effect of the foul air; and if I go down and feel it coming, and I have got a funeral to bury, I burn it out, so that I can go down.

1067. What do you mean by burning it out?—We have got something similar to a plumber's stove, what the plumbers have in the street, and I make that full of shavings and wood, and make a strong fire, and gradually lower it down into the grave by degrees till the foul air catches hold. The foul air, when it is strong, will put it out, and I pull it up again till I get it a-light again, and so I go on till I get it under, and when I get it under, I chuck a lot of shavings in and set fire to it, and there let it burn till it burns out, and then I go down myself and get the earth out as quick as possible.

1068. Do you usually find this gas and foul air coming to you from other coffins on each side of you?—At times very soon after I have burnt it out, I shall have to burn it out again.

1069. And if you were to stay there, what would be the effect?—It would kill me, or any one else.

1070. In digging this depth and taking away the wood of these coffins, has it ever occurred to you that any bodies have fallen upon you?—I never had one in a deep grave, but I had one once; before I was there a man of the name of Fox had the ground; I succeeded him; he is now dead; he was a bad character; he is dead about three weeks. I dug a grave on a Sunday evening on purpose to get ready for Monday; that Sunday evening, and it rained, I was strange in the ground at that time; and when I went to work on Monday morning I finished my work, and I was trying the length of the grave to see if it was long enough and wide enough, so that I should not have to go down again, and while I was in there the ground gave way and a body turned right over, and the two arms came and clasped me round the neck; she had gloves on and stockings and white flannel inside, and what we call a shift, but no head.

1071. The body came tumbling upon you?—Yes, just as I was kneeling down; it was a very stout body, and the force that she came with knocked my head against a body underneath, and I was very much frightened at the time.

1072. You were at the bottom of the grave, and as you were digging at the bottom, the body of this woman without a head fell upon you?—Yes.

1073. From the side?—Yes, from the side.

1074. Out of the coffin?—It had never been in a coffin; it is supposed that they took the head off for the purpose of sale.

1075. Mr. *Vernon.*] What depth were you down when this body fell upon you?—About nine feet.

1076. Might they not have cut through the head as they dug down?—No, this body was taken out of the coffin before; she only lay just on the top of the earth, a little covered over; if she had been buried any depth at all, three or four feet, she could not have fell on me, the shoring of the earth would have kept it up.

1077. Sir *R. H. Inglis.*] You did not find the head anywhere?—No.

1078. *Chairman.*] You say that this body fell upon you; do you suppose that this body had been put in a leaden coffin, and that both the leaden coffin and the other had been stolen, and that the body was left there?—I cannot say that.

1079. What do you suppose?—I suppose that she was buried in wood, in the green ground, and that something affected the head; and the man that I mention as dead, is the very man that did the deed, after the other men left the ground.

1080. He took away the wood of the coffin?—He took away the wood of the coffin, and took away the head, it appears, and then covered the body over as well as he could.

1081. Sir *R. H. Inglis.*] Do you suppose that he took away the head for the purpose of conveying it to some surgeon?—I think so.

1082. *Chairman.*] How many wheelbarrows-full of coffin wood do you say you take away every week?—Not every week, but when we are digging these deep graves I may take away a dozen barrows-full; taking it upon the average, I should say, that for every deep grave I should take a dozen large barrows-full of wood out of the grave.

1083. How

1083. How long had this body been interred?—Not long; because the clothes upon her appeared to be quite fresh.

1084. Then the man whom you succeeded took away the wood of the coffins almost as soon as they were buried?—He must have done that; he had such power; he had more power than ever I had.

1085. Could the body have fallen upon you if the wood of the coffin had not been removed?—It could not have fallen upon me if she had been in the coffin, or if she had been a little way in the earth; but I should say, that he took away the wood work so that he should not be found out; but there was no coffin, or anything else, further than what I have said.

1086. Do you believe that the lead of the coffins has been taken away?—That which they do with it is the same that I have said; they take them down to that place and break them up and burn them.

1087. The question refers to the lead?—I cannot say anything as to myself, as I never did anything of the sort myself; but the man that is dead has done most wonderful things in the vaults; he stripped the lead off the coffins in the vaults; he has been the biggest brute of any grave-digger in this earth, and he suffered for it at last; he died in the Strand Union Workhouse at last; he died actually rotten.

1088. Lord *Ashley.*] Did he drink a great deal?—He could not get it to drink latterly; somebody turned against him.

1089. With reference to what has been done by your predecessor, so far as you believe, how many bodies have had their leaden coffins taken away out of the vaults?—That is a difficult thing for me to answer, for I never worked with the man, but I have heard the housekeeper say, and I have heard some gentlemen say, that he used to be there stripping coffins of a night; and at this place in King-street, St. Ann's, he had a little bit of a wall where he could chuck things over, and he used to have the keys of the vault, so that he used to do as he thought proper, till at last he was found out.

1090. By whom?—By Mr. Chittenden, the undertaker in Dean-street, the old gentleman who is dead.

1091. Are you of opinion that he was in the practice of taking away the lead from the coffins?—It is well known that he used to do it, and he was found out in it, he and his man.

1092. Used they to go and break open the coffins?—He used to get the key of the vaults, and he used to strip the coffins of the lead.

1093. Is it a common practice, to your knowledge, to take away the wooden coffins and the leaden ones?—I am doing it by orders of the board of vestry; when I dig a 20-foot grave, when we find an old coffin that has nothing in it except the bones, and it is all decayed, we take it away; it is not my own wish, it is by the board of vestry I am ordered to do so.

1094. If you come to anything of lead, how do you manage then?—I never found a bit of lead in the two years I have been there.

1095. What becomes of it all?—I do not know; there was a grave-digger after Fox of the name of Collison, and I believe that he was as bad as the other, for I do not think he has left a bit of lead in the ground; he was turned away for thieving and other things that he was found out in, and I succeeded him.

1096. Can this be done in a vault as well as in the churchyard?—No, the churchwardens keep the keys; the keys are not given up unless a funeral is going to be, and then I have the keys to go down and clean it, and get the place ready.

1097. When you cleanse out a vault, and when a great deal of that smell or gas comes into it, what becomes of the gas that you drive out?—In St. Martin's vault, when we were moving there, the gas in the leaden coffin had actually blown the wood-work off, it was so bulged; but the lead being good, it did not burst; I have had eight or nine plumbers there at a time when the coffins have been soldering, but we could not work there unless somebody had got lime-water sprinkled round us.

1098. To your knowledge, was it ever the practice to take the bones of the dead and play at nine-pins with them?—I have heard it from several people, but I never saw it myself.

1099. Sir *R. H. Inglis.*] Do you believe it to be true?—I think the parties that were there at the time would have been guilty of anything; they did not care what they did.

B. Lyons.

7 April 1842.

1100. *Chairman.*] Do you find yourself in a bad state of health, or how?—am not very well; I catched a violent cold through being wet, and being out in all weathers, and I have had a strain.

1101. You do not find the smell so much now; you are seasoned?—I have not got any smell particular; I had my nose broken by a fall, but I feel sometimes the stench that comes, and tastes in my mouth a bit of a twang; but I cannot say exactly what it is; and then I leave it for a little bit.

1102. What is your salary or perquisites?—I have no wages unless I do work, except that I have 18*s.* a quarter for doing the church bells; this week I have not earned a farthing yet; I have half-a-crown for every grown person I bury, and I have half the extra digging, if there is any extra depth, and my master has the other half.

1103. What may you gain a week?—Some weeks I may gain 14*s.* or 15*s.*, and some weeks I may gain nothing; I have been three weeks without earning anything.

1104. On the average, you get sufficient to induce you to continue in the employment?—Sometimes the ladies are very good to me for keeping up their banks, putting little flowers on them.

1105. Would you stay there if you could get the same elsewhere?—If I could get the same as I get there, taking one week with another, I should like it very well.

1106. Do you mean that you would like to change?—I cannot stop there long; I suppose the grounds will be shut up; I have been there now some years, and if I should happen to want anything, the gentlemen give it to me.

1107. Have you been in a bad state of health generally or pretty good?—Yes, till within the last six weeks; I have buried all sorts of diseases, all sorts of complaints; where parsons would not go near them I must go and take the ropes from under them and take them and put them on one side, but the parson would not come near them within 40 or 50 yards.

1108. Were you ever asked to work in the Portugal-street grave-yard?—I was once, but not by the sexton.

1109. Did you go?—No; I would not work in the place on any account.

1110. Why not?—Because it bore such a bad character.

1111. What do you mean by a bad character?—For cutting up the coffins; they do not bury there above two feet deep, or hardly that.

1112. Lord *Ashley.*] Do you mean that it was reckoned particularly unhealthy to dig graves there?—I should not like to dig in a place unless I could get what is regularly allowed by law, five feet; five feet is what I am obliged to dig.

1113. You mean that the graves were not sufficiently deep?—Yes.

1114. Do you mean that the digging of graves was unwholesome there?—No, it cannot be unwholesome when it is within five feet; where it is unwholesome is where you come down 20 feet.

1115. Mr. *Vernon.*] If they go down five feet, that you consider legal?—Yes, that is regular.

1116. But in this Portugal-street grave-yard they have not that practice?—No, they cannot do it, by all accounts.

1117. *Chairman.*] Is it the custom ever to dig through coffins in that grave-yard?—By all account they cannot dig a grave at all without digging through coffins.

1118. Sir *R. H. Inglis.*] Do you speak here from your own knowledge and observation?—I only go by what they tell me, and I have seen the graves there where I could put my arm against the bottom.

1119. *Chairman.*] What is the state of the grave-yard in St. Martin's-in-the-Fields?—I do not think they can bury many there now.

1120. Have you worked there?—I worked there off and on about 24 or 25 years altogether.

1121. What is the state of it now?—It is very full.

1122. Can you dig a grave there without cutting through coffins?—Yes, at some parts where they have been making new areas, where the Duke of Bedford had new areas to dig, the navigators dug through a great many coffins that had been buried 100 years there.

1123. Have you seen them dig graves and cut through other coffins in that ground?—Not latterly.

1124. Have you ever?—Yes, I have, years ago.

1125. Have

B. Lyons.

7 April 1842.

1125. Have you ever yourself dug a grave through coffins?—No, I have not.

1126. But you have seen it done?—I have seen some old coffins dug up there, but nothing in them but bones.

1127. Sir *R. H. Inglis.*] Is this burial-ground in Drury-lane?—Yes, it is.

1128. *Chairman.*] Is there any room in that churchyard for any more persons to be interred?—Where these new areas have been dug, and where there are family graves, where there are head and foot-stones, there is room; the new areas have been made on purpose to give the housekeepers light.

1129. With regard to your health, you look upon yourself now as seasoned, and you do not mind how deep you go?—No, I do not mind how deep I go; I go as deep as I can; in the grave that I have now got open, I and the man that is with me went down 20 and 21 feet with only one pair of shores, and I do not think any other man would have ventured to go down.

1130. From your knowledge, do you know whether the people that follow these occupations do generally become unhealthy or are given to drink?—When I am digging these graves I cannot do without having something to drink, because the deeper I go it gets so warm that it is enough to melt one; it is just the same as if you were in a fire when you go down so far; on the coldest day it will be warmer there than on a fine summer's day; even if you go down to the water, the water will be as warm as possible in cold weather, and in warm weather it will be quite as cold; in a frosty morning you can see the steam come up, just as you would out of a dung-hole.

1131. Is there water in this grave-yard beyond 10 feet?—No; you go down 21 feet and then you see the water springing up.

1132. Are the coffins in the water?—We take the water out, and when you put the coffin down there may be a little water afterwards; there is one gentleman's family grave in the yard, I took 120 pails of water out of it, and his place is beautifully compoed; the water must come in some way or another; it is about 16 or 17 feet deep, and about eight feet square; I took out 120 pails at the last funeral we had.

1133. You have seen smoke issuing out to a great extent?—Yes, in cold weather when you take the boards off; then we leave the boards off for a certain time.

1134. How many graves are left open at a time?—Only one.

1135. Sir *R. H. Inglis.*] When you speak of a grave, you mean a depth of 20 or 21 feet?—Yes.

1136. *Chairman.*] What quantity of shavings have you ever been obliged to burn in order to get rid of the effluvia?—I have been obliged to burn half a sack of shavings in the summer time; it is more in the summer time than in the winter; it is very strong in the summer time; in the grave that I burnt so many shavings in I burnt them there about twelve, and I came back again at one, and then the foul air was just as bad as if I had never touched it, and I had to burn the shavings again; where there is a tier of coffins on the side there must be gas coming from it, because when I fill one grave up, I go alongside of it, and then there must be some gas come from the tier of coffins on the side; but where there is a fresh grave there is not much danger of having it.

1137. Did you ever find any smell in new ground where no one has ever been buried?—No; I buried a gentleman last Sunday in a new piece of ground which had been neglected; it is what is called the best ground (there are two prices for the ground), and I dug a ten-feet grave there and did not find a bit of wood or a bone or anything else; there was nothing but the maiden earth all the way right down, and at the bottom was all beautiful solid clay: the ground has been neglected in different parts.

John Eyles, called in; and further Examined.

John Eyles.

1138. YOU were unwilling the other day, when you were examined, to say much to the Committee. Are you now prepared to state what you know upon this subject?—First of all, I should like to know whether Mr. Fitch can do my mother any harm, because I should not like to see my mother hurt, or to see my brothers turned out of the school. It would be hurting him a great deal, and perhaps for spite against me he would injure my brothers.

1139. Where are your brothers?—In the parish school. Mr. Fitch has a great deal of authority in the parish, and he might say something to get them

John Eyles.

7 April 1842.

turned out of the school, and till I am satisfied of that I should not like to say anything to hurt him.

1140. Mr. *Ainsworth.*] Were you sober the last time you were here?—I wasn't; I had had a little drop of drink; of course I should not like to see my mother suffer through my speaking the sentiments of my mind.

1141. Mr. *Vernon.*] By whom is the school paid for?—A lot of gentlemen subscribe, and my mother has a shilling a week and two loaves. My father died through saving the life of another man, and they allow her a shilling a week and two loaves.

1142. But the school is supported by private subscription?—Yes, and Mr. Fitch knows a great many gentlemen, and he might for spite cause them to be turned out of the school; I should not like to see my mother suffer anything through me.

1143. Sir *R. H. Inglis.*] Has Mr. Fitch said anything to you that makes you afraid?—No, he has not, but I know what sort of a man he is, and I should not like to see my brothers turned out.

1144. *Chairman.*] You say that this school is maintained by voluntary subscription of some gentlemen?—Yes.

1145. And you are afraid that Mr. Fitch will make to those gentlemen some representation respecting you that will induce them to turn your brothers out?—Yes.

1146. If I were to tell those gentlemen that you had only done your duty, there would be no risk that they would be influenced by Mr. Fitch?—It might not, but he has been the cause of other people getting their allowance stopped under the board.

1147. Perhaps that is by their misconduct?—No, by their asking for their rights.

1148. *Chairman.*] It seems to be the opinion of the Committee, that instead of doing yourself any harm by stating what you know, you will be more likely to do yourself good, because the gentlemen here will take your part, and if Mr. Fitch should attempt to do you any harm I should make it a point to write a letter to the persons that subscribe to the school, and I am satisfied that if Mr. Fitch wished to oppress you on account of your evidence here, if you have only stated the truth and done your duty, those gentlemen would be rather inclined to support you and do you more good than if you kept back and said nothing; therefore depend upon it it will be more likely to be for your good and that of your family to sit down and state the truth, the whole truth, and nothing but the truth, in answer to the questions that shall be asked of you?—I should say nothing else but what I can swear to.

1149. Do you remember a person going to the ground in Portugal-street and measuring the depth of a grave?—Yes, Mr. Irving.

1150. What did he do?—He measured the depth of a grave at the back of a tomb-stone against the tool-house. I believe it was six or seven inches. He said it was a coffin; I believe six inches; he did mention the name that it belonged to, but I do not recollect it.

1151. What is the shallowest depth at which you have known a coffin placed?—Since I have been there they have had a tremendous deal of ground brought in when the college was being built, and they took it on from one part of the ground and put it on another. There was a pauper buried out of the house which I remember quite well; nobody followed it; it was buried out of the bone-house, what they call the dead-house, and it was put down where the carpet-ground was, and I believe if the earth was at the same height then that it is now it would be under a foot, but I will say a foot; I would rather say more than less.

1152. Have you ever, in passing over there, smelt any offensive smell?—I cannot say that I have ever noticed it particularly, but there must be a smell, because neither lead nor wood will keep the stench of the body in; it will fly out of lead as well as out of wood; a great many coffins are made now of mill-lead.

1153. Has it affected you in health?—It has a great deal; I nearly at one time lost my life through it.

1154. How did it affect you?—When I went down the grave I went down a little way, and it smelt as if it was brimstone or some sulphury stuff, and when I reached the bottom my sensation was taken away altogether and I could hardly make my way up to the top, and when I got to the top I dropped on the boards,

John Eyles.

7 April 1842.

boards, and then I went home and got some shavings and an old bed-tick and burnt it down the grave to get the foul air out.

1155. How were you affected; did it make you vomit?—It did a great deal; it was a trembling sensation over me, and a nasty coppery taste in my mouth.

1156. Did you lose your appetite?—I did not lose my appetite, but in the afternoon I was taken again at the same grave; I went down in the afternoon; a child was buried, and the webbing that checked the coffin, had turned the coffin over, and it was my duty to unfasten the webbing. When I reached the bottom, I could not make any body hear, and I grasped hold of the webbing, and they pulled me up; and when I got out of the grave I walked to the side of the church, and there I lay for half an hour.

1157. What church was it?—St. Clement Danes, in the Strand.

1158. Have you seen coffins cut through?—If you have orders for it you are compelled to do it; if you are to dig a grave in a certain place, it is your duty to do it, and if not you are told directly, "I will get somebody else to do it."

1159. Then you have cut through coffins?—I have.

1160. Have you ever cut up the lead of a coffin?—Yes, I have once.

1161. By orders?—By orders.

1162. What became of the lead?—I do not know; it was not in my time; I went away soon after I cut it up.

1163. What did you do with the lead when it was cut?—I left it there.

1164. What burial-ground was that?—In St. Clement's church.

1165. Is it a matter of common occurrence to do so?—I do not know; but, if I must speak my mind, I think there is a tremendous deal of lead taken away, both in the churchyard and in the vaults; but I think it is a common thing for the old original coffins to be taken and chopped up; and I think it to be nothing else but the duty of any gentleman that has got any authority, to go into every church vault, and to have the books brought forward to prove how many coffins there ought to be, and to make them account for how many coffins are missing.

1166. Is the wooden coffin within the leaden one?—There are three coffins, the wooden case inside, the lead case outside that, and then the wooden case outside that.

1167. Then when the lead is removed there is still a wooden coffin inside?—Yes, but the gas comes through it; that penetrates through everything. There is a coffin which I have taken down to tap it; that is one of the ornaments that came off the foot of it, (*producing a brass ornament*).

1168. How many coffins do you suppose in St. Clement Danes churchyard have been cut up?—It is impossible for any one to say that; there is but one man that can tell, that is a man of the name of Watkins; he has been there for a number of years.

1169. From what has come under your observation, how many should you say have been cut up?—There are two that I have known; I had my little brother Tom, a child of 12 years of age, to hold the coffin while I did it, by the orders of the sexton, by the orders of Mr. Fitch; they were two old coffins that were smashed by the weight of those above.

1170. Did you find bones in the coffin?—There were bones in it; a body will last a number of years in lead, and still there is a nasty deadly smell in it.

1171. How did you cut it up?—With an axe.

1172. And left the lead there?—Left the lead there under a tarpaulin.

1173. What might the lead be worth of each coffin?—The lead I believe is a hundred and a half or two hundred in each coffin; I should say there were about two hundred and a half, and it would fetch 1½*d.* a pound.

1174. What quantity of wood have you seen taken away, or do you know has been taken away from this churchyard?—The old wood they used to take and put on one side, and then they used to take it home and burn it; they used to give it to anybody that would like to have it; any poor person that could not afford to buy firing would be glad to have it.

1175. How many wheelbarrows full in a week?—I could not say, sometimes more, sometimes less, sometimes none; it all depends upon the work; sometimes we get as much out of one grave as you may out of six or seven others; sometimes you may have a bag full in a week.

1176. What do you mean by "a grave," what depth do you mean?—Five feet is the common depth for a grown person, and three feet for a child; when it is

John Eyles.

7 April 1842.

five feet that leaves four feet from the surface of the earth, but I do not think four feet is enough to keep the effluvia out.

1177. You think the gas gets out of the ground at that distance?—I am sure it does, because the gas will penetrate through anything, it will penetrate through the strongest man; if he happens to hold his head over the place where the gas is flying, it will make him ill; and I think that people going by at the time when a grave is open, must breathe some of the gas, as well as persons working in the grave, for when the gas is out, you can smell it quite strong up above.

1178. How far from the grave will the smell of the gas extend?—It depends upon the wind.

1179. Supposing the wind is blowing towards you, how far will it take it?—If the corpse is about five or six feet below the ground you may smell it six or seven yards from you, but you do not smell it if you are standing by the side and continually in it.

1180. The vaults in St. Clement Danes are close to the street?—Yes, the gas escapes from the vaults into the church through a grating cullett, and many persons who go to the church on Sunday when they come home are taken ill and are dead soon afterwards through the gas in the church; I do not think the lead is of any use to keep the gas in.

1181. You would not like to go to a leaden coffin and tap it?—Yes, I should not object to it; if you keep underneath the coffin, you would not have so much of the gas then; if you keep underneath, the gas flies up; if you tap it underneath, if there is any dead water, or any "soup," as it is called, it runs into a pail, and then it is taken and thrown into some place or another, perhaps down a gullyhole. I have been, before now, compelled to put my clothes out of the window, because the stench has been so great that they could not bear the place.

1182. Has it ever occurred to you to go into a public-house, and to find the smell of your clothes offensive to people there?—Yes, many a time; when I have been doing rather dirty work, when I have come in, I have noticed the people smell and get away on the other side of the place; there is sure to be plenty of room when we come in; they are sure to say, "These chaps have been emptying some cesspool."

1183. Is the smell of these graves more offensive than that of a common cesspool?—I emptied a cesspool, and the smell of it was rose-water compared with the smell of these graves.

1184. Has it ever happened, to your knowledge, that the men have declined digging through the coffins, and that they have been induced to do so by the sexton?—Yes; that is the word, "If you do not like to do it I will get somebody else."

1185. You, or some of the men, have felt a repugnance to cutting through coffins?—It is not a pleasant thing to chop away when it is not fit to chop away; when the body is decayed it does not matter taking that away.

1186. And you have found yourself, and other workmen with you, obliged to cut through, whether you liked it or not?—If you are paid for doing it you must do it, whether you like it or no; if you do not like it, you must go.

1187. Is your father interred there?—Yes, he is; I did not want him to be buried there.

1188. Did anything occur to his remains?—I saw them chopping the head of his coffin away; I should not have known it if I had not seen the head with the teeth; I knew him by his teeth; one tooth was knocked out and the other was splintered; I knew it was my father's head, and I told them to stop, and they laughed, and I would not let them go any further, and they had to cover it over. It is time that something was done to stop it; and there is a slaughter-house close by, in St. Clement's-lane, which is enough to breed any fever.

1189. How many coffins were cut when Mr. Clark, of Gilbert's-passage, was interred?—I think it was either two or three; but there is a person outside the room that kept more account of it than I did; he could tell how many it was.

1190. Do you remember any difficulty occurring when you opened a grave sometime ago, where a person of the name of Beasley was interred?—The orders were to bury him any where; to make room for him, I had to take two children away, to dig another hole and to put them down; I opened a hole close by the side of the grave and put them out of the grave they were in, and put them about four or five feet further in another hole.

1191. Has

1191. Has there been any earth removed of late from St. Clement Danes?—There has been no earth; there has been rubbish and stones from the leavings on the top of the earth after they have been doing it up again.

1192. Where was all this shot?—In St. Clement Danes, opposite Mr. Sharp's; Mr. Sharp moved it.

1193. Is it there now?—There is some of it now.

1194. Is the smell bad?—There is a nasty smell from it, and if you were going along the Strand, you can see some opposite to Exeter-street; they are fresh paving the street; there are railings at the bottom of the street looking into the water.

1195. Is this earth saturated with grave substance?—Yes, it is the rubbish after you have raked the ground all over; this is the rubbish that is skimmed off the top of it; there were two loads of it shot down; they took away a load of it yesterday,

1196. To the best of your belief, it is the common custom to cut through coffins whenever they want to make a grave?—It will not do to cut them away when they have been too fresh put down, but those that have been down a few years are cut away.

1197. After what length of time after it was placed in the ground would you feel yourself justified in cutting through a coffin?—I cannot tell how long they have been put there, and I do not know how long they will be before they decay; some will decay as quick again as others.

1198. Have you ever hesitated when ordered to dig a grave in cutting down through coffins?—Yes, I have said, "There is not room to put down;" but it is said, "You must make room:" but the sexton will not stop over the grave while that is being done; our sexton I know is fonder of pastry than standing over the top of a grave; he goes and has a shilling's worth of pastry while it is being done.

1199. Then when the sexton orders you to dig a grave, he goes away himself?—Yes, and leaves you to do the rest.

1200. Do you know anything of the burial-ground under the windows of the almshouse in St. Clement Danes?—I know that the bodies ought to be removed from there; it is not fit for anybody to live in the adjoining houses; I could go there and take a carving knife, and almost take some of the lids off. They are in a deal box half-an-inch thick; there is a great heap, and if that heap was taken away within nine inches from the top of the earth, you would have to take half of the sides of some of the coffins away.

1201. Do you find a great smell when you pass by?—No, it does not make any odds to me, because I have not been into the ground once since I left the ground.

1202. Is it a wet or a dry place?—It is a damp clayey ground.

1203. Do you know anything about the health of the people in the neighbourhood?—Some are ill, some are better than others; I do not know how the people in the almshouses feel; if it was a hot summer you would see the ground smoke the same as if there was boiling water put over it.

1204. Have you seen that yourself?—I have not noticed it particularly myself, but I know those that have, and if you take the ground up in your hands it is the same as taking ink into your hands.

1205. The ground is so saturated with the remains of dead bodies?—Yes, it is.

1206. Is this in Portugal-street?—No, it is in St. Clement Danes: it is what they call the pauper ground, where the people that are buried by the workhouse are put.

1207. Have you ever observed anything of the same kind in the burial-ground in Portugal-street?—Yes, I have seen the ground smoke and reek on a summer's morning; about five o'clock you will see it smoke the same as if there had been hot water poured down.

1208. Is that in going along to Searle-street?—Yes.

1209. Is a grave ever left open at night?—If you are going to dig a deep grave, you cannot do it all in one day; perhaps you may be four or five days over it, and then it is left open; sometimes we put a tarpauling over it.

1210. Then the smell must come up?—It does.

1211. Have you seen any steam rising up in such cases?—I have never noticed it particularly; I never paid any attention to such a thing as that, but I know it is not right for so many to be buried on a small space like that.

John Eyles.

7 April 1842.

1212. You begin to be more seasoned to it than you were at first?—Yes, it did not matter to me; I had a mother and two brothers to provide for, and I thought I had better take anything than to see them go headlong into the workhouse.

1213. You were driven to it from that circumstance?—Yes, I thought it was my duty to try to keep my mother out of the workhouse as long as I could.

1214. And you have kept her out of it by working at this employment?—I have kept her out of it as well as I can.

1215. Is she now out of the workhouse?—Yes, she is at home.

1216. Have you any reason to believe that among the lower class there would be any objection to the use of lime being applied to the bodies?—I do not know; I do not see that any person could make any objection to it.

1217. You have no reason to think that any objection would be felt to it?—No.

1218. Do you think that in dry ground it would be useful?—In dry ground the lime would be of great use, but in wet ground it would be of no use.

Michael Pye, called in; and Examined.

Michael Pye.

1219. WHAT is your situation in life?—I have been a grave-digger formerly.

1220. For how long?—For about two years and upwards.

1221. Where have you worked?—I worked in St. Clement Danes.

1222. Will you state what is the state of the ground in Portugal-street?—The ground in Portugal-street is full, and frequently in getting a grave I have been compelled to cut away coffins about five feet under ground: in some part of the ground I can positively say that there is not above three feet to the outside extremity but what it is full up to three feet from the surface.

1223. Do you mean to say that whether they were fresh coffins or not, you have cut through?—Yes, we have been ordered by the sexton so to do to make room, and when we have been at work and said that we could not get a grave, the expression has been, "Damn your bloody lazy eyes, you shall get it and make it;" that is an expression he has frequently used to me.

1224. Sir *R. H. Inglis.*] Has he any money interest in the graves?—I cannot say.

1225. Mr. *Vernon.*] It is his duty?—It is his duty.

1226. *Chairman.*] What is the state of the vaults under the church?—There is plenty of room at present; I suppose there are about 200 or 300 there, but there is room for about 400 or 500 more without any occasion to cut.

1227. Is there a smell arising from it?—Sometimes there is; sometimes there is a coffin burst, then there is a great smell there.

1228. Whereabouts are the rector's vaults?—On the right hand of the communion.

1229. Is there a smell issuing from that?—There is no smell till it is opened, and then there is a great smell.

1230. Does it open into the church?—No, it opens into a vault under the church; there is a way down to it from the church by moving the communion table.

1231. Would you venture into that vault as soon as it was opened?—No, I would not under two or three days.

1232. Do you remember a man of the name of Irving visiting Portugal-street?—I do, perfectly well.

1233. What did he visit it for?—He was probing the ground and trying the depth of a grave; he tried one, a child's grave at the back of a tombstone; it was not above five or six inches; Mr. Fitch was upon the ground, and he told me and my mate that was at work with me, that if he ever came into the ground again to run the man through with a searcher, or to knock him down.

1234. He did not like to have intruders?—No; I suppose he was aware of what the man was after.

1235. Have you been affected in your health by this employment?—I have. I have been taken with sickness and spitting, and with a nasty taste in my mouth. In one grave in particular I struck a coffin accidentally with a pickaxe. As soon as I struck it it came out the same as the froth from a barrel of beer and throwed me backwards, and I was obliged to stand some minutes before I could

Michael Pye.

7 April 1842.

could recover. Upon another occasion I was served just in the same way, when our sexton took and walked himself away from the grave, and as soon as he got up he gave me twopence and told me to go and get a drop of brandy, which I did.

1236. Do you find it necessary to have recourse to spirits?—Yes, I do. In my opinion no man can do the work without it.

1237. It has been asserted that it is the practice to remove leaden coffins and to cut them up in the vaults?—That has been the case.

1238. To your knowledge?—To my knowledge the coffins are cut up in the vaults and removed. In one case that I can speak to, the sexton, Mr. Fitch, told me to select two coffins out, which I brought him out into the middle of the vault, and after they were brought out there another man was sent for and I was sent out of the way. I suppose that I was not trusted to perform this duty; another man cut them up. But I thought it a curious thing that I should be sent away, being the regular man there at the time, and I crossed over to the Fore-gate, that is, the pillars opposite the church, and I stood there some considerable time, and about five o'clock in the afternoon I saw a stonemason's truck come down Clement's-lane and go inside the church, and the lead was loaded on the truck, and two men drew the lead away of those two coffins that I had selected out, and some lots of lead and copper remaining in a large chest at the bottom of the vault went away at the same time on the truck. They went down Fleet-street, through Temple-bar.

1239. What might be the value of that lead?—I cannot say.

1240. Do you know whether much wood is taken away from the churchyard?—Wood has been frequently taken away and given to different people to burn; and, to get rid of the wood, one day we built a privy with it, in one corner of the churchyard.

1241. Mr. *Vernon.*] When the lead was taken away, do you know what became of the wooden coffins and the bodies?—The remains were put into a basket, and next morning there was a hole dug on the south side of the churchyard, and the body was put down there without anything on it.

1242. Sir *R. H. Inglis.*] You have stated that the sexton, meaning Mr. Fitch, selected two coffins; will you state why he selected those particular coffins, as far as you know?—I cannot say why he did so; I should suppose it to be to his own advantage; I do not think any one else had anything to do with it; I have every reason to believe it to be his own interest.

1243. Were they coffins in which there was more lead than in any others?—They were very heavy ones.

1244. Do you know the names of the parties buried there?—No, I do not; when the wood was decayed the name and everything was gone.

1245. Do you recognize anything on this table as having belonged to either of these coffins?—Yes, I know that, (*the brass ornament produced by the last Witness*); that came off one of the coffins.

1246. *Chairman.*] Is it the common practice to break up the wooden coffins?—Yes, it is the common practice of late; because the ground has been so full, that in fact you cannot get a grave without doing it.

1247. If you come to a coffin lately put in, how do you cut through it?—If we come to one that is very fresh we can tell by a searcher; but frequently we come to one that feels very soft with the searcher, but when we get on it the coffin is full, and then we are compelled to cut through it to make way for the coffin that is coming.

1248. What do you do with the remains?—The remains are put down at the bottom of the grave, and the coffin that is coming is put on it.

1249. The remains are put at the bottom without any coffin?—Yes; there is just a small piece of ground put over it to hide it.

1250. And that is the common practice when you dig a grave in that way?—Yes.

1251. You take away the wood, and let the remains go to the bottom of the grave?—Yes.

1252. Sir *R. H. Inglis.*] Do you know any particular case that you would wish more immediately to call to the notice of the Committee?—Yes; one day, at the time when Admiral Sykes's vault was being built, I was at work in the vault, and I was standing alongside a tier of coffins, and the coffin that that brass came off was standing amongst them; and I stood close alongside, and one of them burst.

Michael Pye.

7 April 1842.

1253. You mean that one of the coffins burst by the force of the gas within?—Yes; and it came out with such a smell that I was turned sick, and Admiral Sykes gave us 5*s.*, me and the other man at work down there, to get something to eat and drink, and when we had got it we could not touch it; we were down there about four hours at work, and we took the bread and cheese away, because we could not eat it there.

1254. *Chairman.*] When those leaden coffins were removed, why were they removed; was there sufficient room?—There was sufficient room for 500 more coffins.

1255. Then they were only removed for the value of the lead?—That was all.

1256. Was that in the rector's vault?—No, in the large vault.

1257. Have you in the course of your occupation been in the habit of constantly removing bodies when they were in your way?—Yes.

1258. You say when you dig down in the churchyard you cut through?—Cut through every coffin as we come to them till we get the depth we are going, and then the wood is thrown up; and if there are any remains in any of them we let that go to the bottom, barring the bones; if there is nothing but bones they are thrown up too.

1259. Mr. *Vernon.*] What wages are you paid for this sort of labour?—It is all piece-work, so much for every grave, according to the depth we go; the deeper we go the more we get; the first five feet is 1*s.*, and after that it is 1*s.* a foot.

1260. Then you are interested in digging deep, and the person that employs you has an interest that you should not dig very deep?—It appears like it; but I think the sexton gets a greater profit off a deep grave.

1261. Do you know in what manner he is paid?—I cannot say that; I know that he gets 6*d.* off of every foot of ground that we throw out.

1262. And how much is your proportion of it?—Our proportion is 1*s.* for every foot; 1*s.* 6*d.* it ought to be; but he gets 6*d.* of it, and we get 1*s.*

1263. In respect to the time and labour employed, should you earn more wages by digging deep, or by digging shallow?—By digging deep; the deeper we go the better it is for ourselves.

1264. Have you ever been able to dig below the lowest point at which there are any bodies buried?—Yes; we have gone as far as 21 feet.

1265. And that is below the lowest point at which you find any bodies interred?—Yes.

1266. In case of a person having occasion to pay for an interment, when you have dug so deep as that, the charge must have come very heavy upon the party?—Yes.

1267. Have they the option whether they have a deep grave or a shallow grave?—If they choose to have a deep grave they can have it by paying for it; and if there is a deep grave cut out and the parties cannot afford to pay for it, the parish pay for it.

1268. When you have several funerals at the same time, and all the bodies are placed in a deep grave at the same time, do all pay that same heavy fee?—Yes, they do.

1269. Then if you have several bodies expected to be interred at the same time, it is a very beneficial thing for you and for the sexton to dig a deep grave?—Yes.

1270. And you would be tempted to do so, however former coffins might interfere?—Yes; if they are ordered to dig a deep grave, whatever comes in the way, they must do it.

1271. After such deep interment, what is the course; do you cover it up with a tarpauling, and wait till there is another customer?—No, we fill it; we keep the shoring boards in, and fill the ground in.

1272. For what purpose do you keep the shoring boards in?—To be able to open it more easily again, because if we took the shoring boards away, and went to open that grave again, the ground would be so loose that it would fall in upon you; you cannot make it stand a second time.

1273. Mr. *Ainsworth.*] Do you invariably fill up the grave?—Yes.

1274. *Chairman.*] Would you choose any other employment in preference to this?—I would, if it was not half the money.

1275. Lord *Ashley.*] Do you find it a very unhealthy employment?—A very unhealthy employment.

1276. Have

Michael Pye.

7 April 1842.

1276. Have your family been affected by your clothes being impregnated with this gas?—My children have been frequently ill, but I did not blame it to that till I found out lately that that was the cause of it; as soon as I have got to the fire they have found fault with the smell terribly; and as soon as I took my clothes of I put them outside the door or outside the window.

1277. Are you in this employment now?—No, I am a jobbing bricklayer and plasterer now.

1278. How long have you ceased to be a grave-digger?—Last Christmas twelvemonth.

1279. Do you find your health materially better since you have given up this employment?—Yes, very greatly better.

1280. And you would not return to the same occupation?—I would return if I were in the same condition as I have been the last few months, for the sake of my family; I have been out of employment the last four months.

1281. But calculating upon employment shortly in your present occupation, you would not undertake a situation of that sort?—No, I would not, and particularly in the grave-yards in London; I would not object to take a place in a cemetery in new ground.

Lunæ, 11° *die Aprilis*, 1842.

MEMBERS PRESENT.

Colonel Acton.	Mr. E. Denison.
Mr. Ainsworth.	Mr. Kemble.
Sir William Clay.	Lord Mahon.
Mr. Cowper.	Mr. Scarlett.

W. A. MACKINNON, Esq. IN THE CHAIR.

Colonel *Acton*, a Member of the Committee, Examined.

Col. *Acton*, M. P.

11 April 1842.

1282. *Chairman.*] AS a Member of this Committee, have you given your attention to the evidence which has come before it?—I have.

1283. In consequence of that evidence, you thought it advisable yourself to visit some of the places mentioned in the evidence before the Committee?—I did.

1284. Will you have the kindness to state to the Committee what places you visited?—Enon Chapel, Clement's-lane; Portugal-street burial-ground; St. Clement Danes burial-ground; and a small ground near the bottom of St. Clement's-lane, where they informed us they had ceased to bury.

1285. Were you prevented from seeing any of the places?—They refused to admit us at Enon Chapel.

1286. Did you apply to go into the vaults under St. Clement Danes Church?—Yes.

1287. Did you gain admittance?—They refused us admittance.

1288. Having heard the evidence which has been adduced before this Committee on the last two days of their sitting, will you state whether or not that evidence is confirmed or contradicted by the evidence you yourself obtained?—I think, as far as we could form an opinion from what we saw, it is most fully borne out. There were several points that we did not take any note of, such as the leaden coffins swelling, from the internal gas; but we saw enough to convince me that the statement as to the general injury done to the town by the grave-yards was perfectly borne out.

1289. As far as your observation goes, you think the evidence was correct?—Perfectly, as far as my observation went.

1290. Lord *Mahon.*] Did you perceive any effluvia in the chapel?—No; the day happened to be remarkably favourable for carrying off effluvia, there was a fine brisk air; and another reason was, some of our party were smoking, and that had a tendency to prevent our observing it.

Col. *Acton*, M. P.

11 April 1842.

1291. *Chairman.*] Did you see any of the bones in either of the grounds?—We saw the bones lying exposed throughout all of them; and when the ground was a little disturbed, it was full of bones.

1292. Was there anything that struck you particularly at Enon Chapel?—I had no opportunity of ascertaining anything at that chapel, in consequence of the refusal, except that I perceived that the boards were very loose from the floor; and so far it was confirmatory of the evidence we had received, as to there being no ceiling.

1293. You were not allowed to go into the vault underneath?—We were not.

1294. Judging from your own observation, do you think that what you saw is likely to be injurious to the health of the neighbourhood?—It must be extremely injurious to the health of the district. I think it is impossible that the state of the yards can exist as they do without its being prejudicial to the health of all the immediate neighbourhood; and I must add, that I think the evidence that we have received is fully borne out. I did not in any one case observe that they had mis-stated or exaggerated in any part of the evidence which they have brought forward.

1295. Lord *Mahon.*] You were informed that this chapel is henceforth to be used as a school-room for Roman-catholic children?—Yes, that was stated, and to be used for a temperance society; they were fitting it up with benches; the man I asked about it said it was intended for a temperance society; there was some conversation afterwards about a school being held there.

1296. *Chairman.*] Did the evidence turn out to be correct that that chapel was near a sewer?—We examined the vicinity of it, and we saw the flag over the main sewers immediately attached to the vault of the chapel; I imagine the vault of the chapel is connected directly with the sewer, as was stated in the evidence given to us.

1297. As you have mentioned already, as far as you can judge, that part of the evidence is fully borne out by your observation?—I believe so; I did not observe any one particular in which they had exaggerated or mis-stated: there was a great deal of evidence we had not an opportunity of obtaining confirmation of. If an interment had been taking place, we should have been able to see more, but I ascertained fully to my satisfaction, so far as I was able to do, that the evidence was borne out.

1298. Have you anything further to say, as to what came under your notice?—One of the pumps at St. Clement Danes, which had been sunk for the benefit of the public, they were obliged to shut up, in consequence of its being too near the foundation.

1299. Lord *Mahon.*] From whom did you receive that information with respect to the pump?—We saw that the pump is shut up, and we heard from a man who has charge of the fountain that it had been built up in consequence of the water being found improper for use.

1300. *Chairman.*] Does anything else occur to you?—I judge from the extreme unwillingness, and violence indeed, of the keeper of Enon Chapel, that there must be a very great body of injurious matter concealed. I think it clearly proved that, in his opinion, it was very improper it should continue; he was about striking one of the boys who accompanied us; he would not suffer it to be inspected.

1301. Independently of the evidence which has come before the Committee, is it your opinion that it would be desirable to have interments out of town?—I am decidedly of that opinion; what I saw on Friday very much confirms my previous opinion.

Peter Ainsworth, Esq., a Member of the Committee, Examined.

P. Ainsworth, Esq. M. P.

1302. *Chairman.*] AS a Member of this Committee, you have attended to the evidence that has come before it?—I have.

1303. Did you some short time back think it right to visit certain places in this metropolis, for the purpose of ascertaining the facts which have been spoken to?—I did.

1304. Have the goodness to state what places you principally visited?—The first we visited was St. Martin's-in-the-Fields burial-ground, in Drury-lane; we then

then visited the small burying-ground in Russell-court, for St. Mary's in the Strand; we then visited St. Clement Danes and Enon Chapel, and the ground in Portugal-street.

1305. Were you refused admittance at any one of those places?—We were refused admittance into Russell-court burying-ground.

1306. Did you visit Enon Chapel?—I did.

1307. Did you go into the vaults there?—No; we were refused admittance into the vaults.

1308. As far as your observation went, what struck you particularly?—As far as we could ascertain from those who resided in the neighbourhood of Portugal-street burying-ground, the odour arising from that ground, as well as others, when the weather was warm, or when much rain had fallen, was extremely offensive, and consequently prejudicial to the health of those residing in the neighbourhood. The smallness of the surface, and the situation in which it is placed in the midst of so dense a population, struck me as objectionable, and particularly the ground in Russell-court. I perceived a hole in the ground, and I was informed that the hole had been bored into a coffin in order to allow the gaseous matter to escape, and that that was very frequently done in St. Martin's.

1309. Mr. *Cowper.*] Who informed you of that?—One of the grave-diggers in attendance.

1310–11. *Chairman.*] Did anything else come under your observation?—I think the evidence of a former witness was confirmed with reference to the alteration in St. Martin's burial-ground, when the witness stated the Duke of Bedford had thought necessary to make an excavation in a portion of the south side of the burying-ground to cause better ventilation in the houses; and the bricking up the cemetery six or eight feet deep, showed evidently what had been originally the base of the ground, and the large quantity of earth, bones, &c. which had been removed.

1312. Were there any grave-diggers at work when you reached the ground in Portugal-street; and did they continue?—There were grave-diggers at work, but it appeared to me that as soon as we began to make inquiries they ceased their operations.

1313. Can you imagine for what reason they ceased their operations?—No, it is impossible for me to say.

1314. Do you conceive, from your own observations, that the houses overlooking the churchyard must be unhealthy?—Very unhealthy, I conceive.

1315. Had you any opportunity of seeing what was below Enon Chapel?—No.

The Rev. *J. C. Abdy*, called in; and Examined.

1316. *Chairman.*] WERE you formerly curate of St. George's, Southwark?—I was.

1317. Will you state what took place with regard to the interments in that parish?—I will freely give certain information connected with St. George's parish, if I may be allowed to make this previous remark: that my opinion decidedly is, that funerals in certain churchyards in the metropolis should not be, without qualification, prohibited. I can imagine very serious evil to arise if there be any law which shall, without certain restrictions and qualifications, prohibit funerals in certain churchyards; and I do sincerely hope and trust such a stringent law may not pass.

1318. Have the goodness to give your reason for that opinion?—In my own parish we have a very large spacious churchyard, and we have no inconvenience arising from the interment of the dead; we have a number of vaults; there are many of them with scarcely more than one or two tenants, and they may hold from 10 to 20 more. The descendants of the persons who are there interred expect to lie there themselves; and it would be a great source of regret to them to be forbidden to lie with their fathers and relatives, when no possible inconvenience can arise from their so lying. I have a strong feeling on the moral and religious influence of burials round a church. The living go up to worship God every Sabbath-day, and it appears to me to be very likely that passing by the grave or tomb of their departed relatives, a serious thought may strike them, confirmatory of that which they hear in the church.

1319. Do you not think there is more disgust with the feeling or smell which they experience?—Oh dear, no! there is no smell in St. John's.

Rev. *J. C. Abdy.*

11 April 1842.

1320. Mr. *Ainsworth.*] Your burial-ground is large, and not fully tenanted?—Just so; and the vaults are large and commodious. Having made that statement to free myself from the imputation of being an opposer of burials in churchyards, I will state that I conceive there are many vaults and many churchyards which are a disgrace to the clergy and to all parties concerned. I have no difficulty in saying that; and I may be permitted to say, that many years ago there were two facts existing in the parish of St. George's, which were disgraceful to all parties concerned, namely, that they permitted burials to take place in the vault underneath the church, without being in lead; and the consequence of that arrangement, together with the immense numbers which were there interred, was, that the vault was so offensive that the clergyman never went into it. During the whole number of years I was curate of that parish, I never went into the vault, but I stood at the top of the stairs, and there read the service. I was told it was offensive, and that the clergyman never did go down. The other fact is, we had a burial-ground for what we call the paupers; it was called the Lock burial-ground, in the Dover-road. I regret that I was obliged, as curate, to see coffins heaped one upon another, and bones lying about; and the graves come so near the surface of the earth, that nothing but the fact of my being curate, having no authority, the rector being resident, would have induced me to perform the service.

1321. Lord *Mahon.*] Why was that called the Lock burial-ground?—Was it connected with the Lock Hospital?—Possibly it may have been some centuries ago.

1322. *Chairman.*] Did you yourself smell the effluvia arising from those bodies in the vault when you were in the church?—I cannot say that I did.

1323. But you are certain that they were interred there without leaden coffins?—Yes.

1324. Mr. *Cowper.*] Did the persons suffer who went down?—I cannot say. The undertaker took the mourners down to cast their eye into the place, and instantly to return.

1325. Mr. *Ainsworth.*] Is it arched?—I cannot say.

1326. *Chairman.*] What is the size of the Lock burying-ground?—I cannot say; I have no idea of measurement.

1327. Mr. *Denison.*] You have stated that one of the great objections was the burial of corpses not enclosed in lead in a vault in the church; are you not able to say that any bad consequences arose from that, that any disagreeable effluvia ever made its way into the church?—I am not aware of any instance.

1328. Where is the entrance to the vault?—By a lobby which leads to the gallery; when I have stood at the top of the stairs there was a very close, uncomfortable smell.

1329. What sort of a door was it?—A wooden door; when the door was open there was a very close, disagreeable smell.

1330. Mr. *Kemble.*] Is the Lock ground used as a burying-ground now?—I believe so.

1331. It must of course be much more crowded now than formerly?—Certainly it is; I have no hesitation in saying that that ground is a nuisance.

1332. *Chairman.*] This grave-yard called the Lock ground is completely full?—In my time, 19 years ago, I thought it was scandalous to go on burying there.

1333. Lord *Mahon.*] Yet they still go on burying to the present time?—Yes.

1334. Mr. *Kemble.*] Did you often attend funerals there?—Twice a week.

1335. Did you feel inconvenience in doing so?—I never thought about it; when I had the duty to perform there were unpleasant smells, but I think I am bound to say that they arose generally from the state of the corpe which was being buried rather than the grave-yard.

1336. Mr. *Cowper.*] Should you wish that the custom of burying on Sundays should be discontinued?—Very much indeed, in a religious point of view; but I have a great doubt how, in populous places, it would be possible for the poor to lose another day; great evils do arise from Sunday funerals; it is a gross desecration of the Sabbath.

1337. Is it confined to the poorer classes?—No; in London shopkeepers bury a good deal on Sundays.

1338. Lord *Mahon.*] From what does the desecration arise?—In the first place,

place, there is a great deal of manual labour performed, which is contrary to the fourth Commandment; there is a great deal of mercantile work, all the dressing out the feathers and so on; it is a regular business; the Church service itself can only be said to be religious, all the other parts must be termed worldly. There is another serious evil arises from Sunday burials; the bearers go into public-houses; they necessarily must, as they have to wait for the precise time of the funeral starting; and there is drinking afterwards. At Clapham, I believe, there are not any funerals on the Sunday.

1339. Would they refuse to bury on a Sunday at Clapham?—I believe so.

1340. Mr. *Ainsworth.*] You do not think the clergy could refuse to bury the dead in London?—No, it would be attended with so much inconvenience and positive loss to the poor population.

1341. Lord *Mahon.*] Do you find funerals on Sundays common, besides those of the labouring population?—Certainly not; there are some persons of the middling classes; it is not confined to the poorer classes, but shopkeepers in many instances; what is called a genteel funeral certainly does not take place on a Sunday.

1342. Mr. *Ainsworth.*] Do you know any other interment ground in the neighbourhood of London which is objectionable on the ground of its being overfilled?—We hear of such things; and I can very well suppose in the larger parishes that the evil must exist; if it were possible to have a regulation that every grave in the first instance shall be dug as deep as possible, and on no pretence to disturb the body therein interred, but merely place one on another till they come within a certain distance of the surface of the ground, I apprehend no evil will arise. There is a regulation in our parish which positively interdicts the sexton digging a grave of less than six feet from the surface.

1343. Sir *William Clay.*] Is that for a common coffin?—Yes; if he cannot find room at six feet he is forbidden to dig.

1344. Supposing the grave to be opened to this depth of six feet, is he prohibited from putting more than one coffin into that grave?—The practice unquestionably is that he is not prohibited; and a very bad practice exists, which is contrary to all church government, and for which every person concerned is liable to ecclesiastical censure, but where a grave has one coffin, or I may say two, at that depth, the coffin or coffins are taken up, and the grave lowered, the fresh coffin first put in, and then those that have been taken out placed upon it.

1345. Supposing that were to be done, there being no prohibition as to putting more than one coffin into a six-feet grave, how near to the surface would the last coffin be?—Merely the depth of the coffin; when he has placed the coffin five feet, or nearly so, would remain.

1346. He would not be permitted to put another coffin on that without deepening the grave?—No.

1347. Is it the rule in your parish that there shall be at least five feet over every coffin?—Yes.

1348. Is that regulation adhered to?—I believe so.

1349. So that there is no corpse interred in St. John's churchyard with less than five feet of ground over the coffin?—I believe that is so.

1350. Mr. *Ainsworth.*] Do you mean to say that they positively disinter the dead to make room for a fresh coffin?—Yes, I am sorry to be compelled to say that that is the practice; that occasionally, when it is supposed there is not more than one coffin six or seven feet deep, the practice exists of taking up that coffin or coffins, digging down to 20 feet possibly, then putting in the new coffin, and then reinterring the original ones.

1351. Sir *William Clay.*] You say the sexton is forbidden to dig any grave unless he can find room for a grave six feet deep; is he the sole judge whether he can find room for a grave six feet deep?—Yes.

1352. Then, if he should be tempted, for the sake of finding room, to disturb bodies already in possession of the ground, he is the sole judge of the propriety or impropriety of so doing?—Yes, he is; it ought not to be so.

1353. You do not speak confidently to there being five feet above each coffin?—That is the rule in St. John's parish, and I believe it to be uniformly attended to; but the parish of St. Olave have a right of burial in our ground, and we have a reciprocal right of burial in St. Olave's ground; what takes place under the St. Olave's parish is different.

Rev. *J. C. Abdy.*

11 April 1842.

1354. Mr. *Cowper.*] By what authority was the rule you allude to imposed on the sexton?—An order of vestry, made with the concurrence, of course, of the rector and churchwardens and persons assembled in vestry.

1355. Sir *William Clay.*] Has there been any negociation between the parish authorities of St. John's and St. Olave's and any of the railroad companies that come into Southwark, for the purpose of providing a burying-ground in lieu of one which is to be destroyed in the course of forming the termini of those railways?—Yes, there has been a very long communication between the two parishes and the Greenwich Railway Company, in consequence of an Act of Parliament which passed three or four years ago, authorizing them to take possession of the Flemish burying-ground, the railroad company undertaking to provide a suitable ground in or near the said parish of St. Olave or St. John, into which are to be interred the dead now lying in the Flemish ground.

1356. Was the use of the ground so to be provided to be limited to receiving the remains at present in the Flemish burying-ground, or was it to be used for the future also as a place of interment?—It was to be used as a place of future interment in lieu of the ground given up.

1357. What is the character of the burying-ground you call the Flemish burying-ground?—A very respectable ground.

1358. Was it a general place of interment for the parishes of St. Olave's and St. John's, in addition to the churchyards of those two parishes?—Yes.

1359. Was it much used for the purpose of interment?—Yes, particularly by St. Olave's.

1360. It was the intention to apply the ground to be provided by the companies to the same purposes to which the Flemish burying-ground had been previously applied?—Yes.

1361. What is the state of this negociation between the parish authorities and the railroad company?—The railroad company have from time to time proposed various pieces of ground to us, for the most part closely abutting on the railroad. I may take the liberty of saying I have been rather opposed to our consenting to take any one of the pieces of ground they have offered, because I did not deem them eligible; in fact, it is impossible, without an immense sacrifice of money, to get ground in either of the two parishes, unless it be ground closely abutting on the railroad, which we do not deem suitable. They have found it impossible to get a piece of ground which will meet our views, and they are about to apply to Parliament for an Act to pay us a certain sum of money, and not be bound to find the ground.

1362. What is intended to be done with that money?—The application of that money will very much depend upon the measures this Committee may propose.

1363. Have they not proceeded so far as to serve notices on the inhabitants of some other portion, either within the parish of St. Olave's or St. John's, or some parish close adjoining?—Yes.

1364. Where was that ground?—It was in the parish of St. Olave, adjoining what is called Snow's Field.

1365. Was this a densely-peopled neighbourhood?—Very densely populated.

1366. The Committee understand you to say that for the present that intention is relinquished, and those notices will not be acted on?—Just so.

1367. Mr. *Kemble.*] Had not the Greenwich Railroad Company power to take the ground?—They had no power to get hold of that ground; they simply gave notice that they intended to apply to Parliament to give them that power.

1368. Does it rest with the two clergymen to approve of the ground; is not the bishop called in in some way?—The rector and churchwardens of the two parishes were to approve the ground, and then the dead in the Flemish ground were, with the concurrence of the bishop, to be interred. The bishop must approve of the ground, for we could not make any use of it before it was consecrated; therefore that would involve his approval.

Edward Charles Copeland, called in; and Examined.

E. C. Copeland.

1369. *Chairman.*] WHAT is your situation?—Formerly I was in the habit of digging graves in St. Ann's, Soho.

1370. You were a grave-digger of that parish?—Yes.

1371. Have you ever been affected in your health by your occupation?—I was made

made very ill with something—typhus fever, I presume, that came from the scent of the earth; and, as I was digging about a ten-foot grave, a part of the earth fell in upon me to my loins; and Fox the grave-digger gave me some wood to take home to burn, which was not half decayed. I took a little home, and put a bit on the fire, and it caused such an extraordinary smell in the place that it made my brother and me ill of the typhus fever.

1372. Did it affect any other persons in the house?—No; I took it off and threw it out, and would not have any more burnt.

1373. Have you smelt any unpleasant smell when you have been digging graves?—Yes; and I have felt a sort of stoppage in my throat, like chewing a penny-piece.

1374. How did it affect you?—It made me queer for some time after; when I was digging, I was obliged to go out and get a drop of spirits now and then.

1375. Have you enjoyed better health since you left that occupation?—Yes, for the last ten years, when I left off that occupation.

1376. Do you think the occupation of grave-digging is very unhealthy?—I am sure it is; and I have seen them play at what is called skittles; put up bones, and take skulls and knock them down; stick up bones in the ground and throw a skull at them as you would a skittle-ball.

1377. Who has done that?—Fox and a party who used to go there to assist him in digging.

1378. Have you known of the handles and nails of coffins being taken away?—Yes, there have been a great many taken away off the coffins.

1379. Who took them away?—Fox, the grave-digger; he died lately in Drury-lane.

1380. Could the inhabitants, in looking out, see all this?—Yes, they could not be off it; for it is surrounded with back premises all round.

1381. Have you heard of any leaden coffins being cut up?—I do not know that I have there; but I have known Fox take off the handles and take out the nails with a sort of crow-bar.

1382. Did he keep them for his own use?—Yes, he sold them.

1383. What do they do with the bodies when they cut away the coffin wood?—They emaciate them; the flesh they leave in the ground, and take the bones to the bone-house. I have seen them chopped up before they were a quarter decayed. About nine years this month, my father was laid there. I cannot answer whether he lies there now, or whether he is one taken up and knocked about.

1384. What is the reason for the taking them up; is it merely want of space?—Want of space I should say; the ground is over-full now.

1385. Suppose they came to quite a fresh coffin, what would they do?—If it has been in three weeks, they would not mind cutting it in two. I have seen them not a quarter decayed before they have been cut to pieces with the pick-axes. I have not been in the ground since my father was buried; that is nine years ago.

1386. Do you think there is a smell or evaporation arising from this grave-yard?—I am sure there is; I smelt it myself when I have been in the grave; I have had something come in my throat just like copperas, as if I had been chewing a copper penny.

1387. How high is the ground above the street?—I should say it was level with the pavement.

1388. Is the churchyard level with the street, or is it above it?—It is level.

1389. It is not above it?—No.

1390. Is there a pump near it?—There is a pump facing the watch-house.

1391. How far from the churchyard?—I should say about six feet.

1392. Have you ever drunk of that water?—Yes, many times.

1393. Is that water good?—I do not find any fault with it; it stands in Dean-street.

1394. Can you speak as to the health of the people who live in that neighbourhood?—No, not now; there were two or three people died there when I lived in King-street.

1395. Since you have given up your occupation of grave-digger, you say, your health has been improved?—Yes, it has.

1396. What is your occupation now?—I am a carpenter by trade; I was apprentice at that time, only I was out of work; my master failed, and I could not follow on my business.

E. C. Copeland.

11 April 1842.

1397. You have given that up and become a carpenter again?—Yes.

1398. Do you think the remains of the dead are much mutilated in the churchyards of this town?—Yes.

1399. Have you any doubt of that?—No.

1400. Are you sure of your statement, that after a coffin has lain in the ground only three weeks it has been cut to pieces?—Yes.

1401. Do you think that is a common occurrence?—Yes; it was in that ground, by Fox the grave-digger.

1402. Have you heard of other grave-diggers who were employed being in bad health?—There was one named Brown who used to work for Fox at the same time, who sometimes works, I believe, in St. Giles's; but I never go into any of the grounds now.

Jovis, 14° die Aprilis, 1842.

MEMBERS PRESENT.

Mr. Ainsworth.	Colonel Fox.
Sir William Clay.	Lord Mahon.
Mr. Cowper.	

W. A. MACKINNON, Esq. IN THE CHAIR.

Colonel *Fox*, a Member of the Committee, Examined.

Colonel *Fox*, M. P.

14 April 1842.

1403. *Chairman.*] AS a member of this Committee, have you attended to the evidence which has come before them?—I have.

1404. Have you taken an opportunity of visiting some of the places to which that evidence referred?—Three of them.

1405. Have the kindness to state what they are?—The churchyard of St. Clement Danes, the outside of Enon Chapel, and Portugal-street grave-yard, and one other in Russell-court.

1406. As far as your observation went from what you yourself saw, does it confirm the evidence brought before the Committee?—Most decidedly.

1407. Your opinion concurs in respect to the evidence which has been given?—As far as my observation went, certainly.

1408. Is there anything you wish to state to the Committee from your own observation?—I wish to state my extreme disgust at almost everything I saw; the basement stones of several houses adjoining different churchyards being far below the surface of the earth, in which innumerable bodies, it appears, are placed.

1409. In your opinion, a change of the system is necessary?—Decidedly so. With regard to Enon Chapel, we were prevented going down into the vault; but I thought, through the crevices, I could perceive bones; there was nothing at all events but the planking.

1410. Did you ascertain that it was near the common sewer?—Yes.

1411. Did anything else occur to your observation while you were there?—On going by the side of Portugal-street grave-yard, we observed a man in a grave digging, and another superintending; we all agreed to go to the back of the premises of a house looking down on where they were, to see what might occur, but before we got to the third story of that house, both those persons were gone, which we considered as a proof that they had observed us. We had also observed that one was throwing bits of bones into a basket; I was struck also with the holes made by crowbars—searchers as they are called—in several places into the grave-yards, which of course must let out foul air.

1412. Is it your opinion that the present state of things is injurious to the health of the inhabitants?—Yes.

The Rev. *James Endell Tyler*, called in; and Examined.

Rev. *J. E. Tyler.*

1413. *Chairman.*] YOU are rector of St. Giles-in-the-Fields?—I am.

1414. Have you been there any time?—Nearly 16 years.

1415. You

1415. You are aware of the object of this Committee; have you anything to state to them with regard to the state of the grave-yard?—I am not aware of anything in particular. I ought to state we have two grave-yards, one called the churchyard, and the other the cemetery; the churchyard has been consecrated a great number of years, I believe as far as legal memory can go back, at least the greater part of it; some parts have been added; the cemetery was consecrated nearly 40 years ago.

1416. Where is that situated?—It is between King's Cross and Kentish Town, in Pancras-road, close to the old parish church of St. Pancras. When that cemetery was consecrated it appeared right to the authorities of the parish to shut up the old burial-ground entirely, excepting in the case of persons whose relatives were buried there before. When I succeeded Mr. Benson, now the master of the Temple, I found it had been recently re-opened, having been shut up for 20 years, so that most part of it was nearly like new ground; there was scarcely any human matter at all in it except dry bones. The cemetery in the St. Pancras-road is in a very admirable state; a large body of the whole square has never been used.

1417. At what distance is that from the church?—Nearly two miles. On receiving the Chairman's letter I sent to ascertain the number buried in each, and I found that between the 31st of December 1840 and the 31st of December 1841, there were buried 1,391 in St. Giles's cemetery (more than the half of whom would be children); and in the old churchyard there were only 469 buried.

1418. Mr. *Ainsworth.*] What size is the burial-ground in St. Pancras-road?—I have not ascertained exactly, but I think it is between five and six acres.

1419. If you have so good a grave-yard two miles out of town, why do you bury at all in the churchyard next the church?—There is no objection to our doing so, unless from the general objection to burying in towns. But there is a very great reason why we should continue to bury there: we have no right to refuse it, in the first place; and then from the mere circumstance that that burial-ground was consecrated by a Roman-catholic bishop, and our new cemetery was consecrated by a Protestant bishop, the Roman-catholic Irish are desirous of burying their relatives in the old ground, and in consequence of that ground having been shut up for 20 years, there is no objection on the ground either of health or decency.

1420. Lord *Mahon.*] Do you gratify the Irish in this desire?—Always. During the cholera, indeed, when we determined, at all hazards, not to bury the corpses of those who died of cholera there (and many died in my parish), I was obliged to go to Dr. Bramston, the vicar apostolic at the time, to request that he and I should act together. He behaved with the greatest possible politeness, and we sent out a circular with our joint names, which satisfied the Irish that they might be buried in the new cemetery; they had at first a great objection, but the bishop told them from the altar that they ought to submit, and it was done.

1421. This cemetery was acquired about 40 years ago?—I think it was in 1804.

1422. At whose expense?—The parish raised a sum of money on annuities to purchase it.

1423. On mortgage of the lands?—Of the rates; under an Act of Parliament exclusively for that purpose, which enabled them to raise the money, and to levy a rate on the parishioners every year until it was liquidated.

1424. Has it been so liquidated?—Yes, since I became rector; I think about 10 years ago.

1425. Are the burial fees in this cemetery the same as in the churchyard?—They are not exactly the same; the Act of Parliament provides that they shall be the same, unless it shall appear to the rector, churchwardens, and vestrymen that different fees would be desirable; and different fees were originally fixed. There could not be the same fees, because the new cemetery was divided into three different grounds, first ground, second ground, and third ground; one considered more desirable than the others, and the fees were much larger in the first ground than the second, and in the second than in the third.

1426. Mr. *Ainsworth.*] The fees were influenced by the locality?—Yes.

1427. Lord *Mahon.*] Which was the highest of any of these; the various

Rev. *J. E. Tyler.*

14 April 1842.

ones in the cemetery, or the one in the churchyard?—Those in the cemetery, much, I believe.

1428. What are the fees in the cemetery and in the churchyard?—Churchyard: Grown persons, 18*s.* 8*d.*; children, 10*s.* 6*d.*; and one half more for non-parishioners.

Cemetery:

	Catacombs.			1st Ground.			2d Ground.			3d Ground.		
Parishioners:	£.	*s.*	*d.*	£.	*s.*	*d.*	£.	*s*	*d.*		*s.*	*d.*
Grown - -	4	4	–	2	–	–	1	5	–			
Children -	3	3	–	1	9	–	–	14	–	Grown	12	6
Non-parishioners:												
Grown - -	6	6	–	3	3	–	1	11	6	Children	7	–
Children -	4	4	–	1	15	–	1	1	–			

I ought to mention that, I think about 10 years ago, or more, we found, before the Bill which is called the Anatomy Bill passed, there was a great desire of persons to be buried in front of my church, because, from the lights, every motion could be seen, and no person could come to disturb a body without being seen by the watchman. I found it absolutely necessary, in consequence, to raise the fees for burial there, so as to diminish the large number. I was afraid of the consequences of some effluvia, but we have never found it in any one instance.

1429. Can you state the sum expended in the purchase and construction of the cemetery?—It was a large sum. As far as my judgment goes, it was very injudiciously expended.

1430. You think the same object might have been attained at a less expense?—I think so; but it is a very fine ground.

1431. Colonel *Fox.*] Have you an endowment?—No, there is no endowment; the Duchess Dudley, in Charles II.'s time, left her house and stables for a rectory-house, but the Lord Chancellor determined that its locality entirely unfitted it for that, and therefore, under a decree of the Court of Chancery, it has been let out on building leases.

1432. Sir *William Clay.*] There are still, on an average, from 400 to 500 burials take place in the old churchyard?—Yes.

1433. What is the extent of the old churchyard?—I should think nearly two acres.

1434. Does that include the site of the church?—I should think it does.

1435. You have stated that there is a portion of the ground considered nearly equal to fresh ground, not having been disturbed for nearly 20 years?—Yes, except for the bones, which will remain for centuries. A portion has not been disturbed for nearly 40 years.

1436. What arrangement is followed in interments? Do you proceed regularly through the ground, allotting a certain portion to the burials of each year?—No; we have, as nearly as possible, begun from the church on the side the furthest from the street, and gone on gradually; but the sexton, I believe, has allowed persons to fix on any spots which they prefer.

1437. Is there any regulation as to the depth of a grave?—Yes; we insist on a grave, in the first instance, being at least from 12 to 14 feet deep.

1438. Is there any regulation as to the distance from an old grave?—No; I believe the general rule is to go as near as possible.

1439. You are not able to state to the Committee how near they go?—I take it they go as near as they can.

1440. The Committee have had evidence before them rendering it exceeding probable that where the graves are very near, the wall of earth between is not sufficient to prevent effluvia from the old grave?—I have never heard of anything of that sort having been felt.

1441. You are not aware of any regulation as to the intervening space between an old grave and a new one?—No; I think they put them, as near as possible, side by side.

1442. The general depth you say is 14 feet; is there any regulation as to the number of corpses which may be put into a grave of that depth?—No; the only circumstance

circumstance required is that there shall be a certain quantity of earth above the coffin.

1443. What depth of earth is required?—Never to have less than three feet; the grave-digger would be subject to reprimand and dismissal, if it was found to be less.

1444. Are there directions given him to that effect?—Yes.

1445. Are they given by the vestry?—No, they have nothing to do with it.

1446. By yourself?—Yes; and the churchwardens.

1447. Colonel *Fox.*] Have you ever had occasion to reprimand or dismiss a grave-digger in consequence of a breach of duty in that respect?—I have often remonstrated as to carelessness with regard to those bones; I have spoken of it more because it is decidedly an impropriety that the least remains should be seen.

1448. Have you ever had to find fault with or dismiss any grave-digger in consequence of disobedience to orders with regard to the depth of earth on the grave?—No; a man who appeared before this Committee last week has been there 12 years, and has been always in very good, stout health; I have every reason to believe he has obeyed the orders I have given him with regard to any effluvia escaping. Having been there sixteen years, I never have heard of a complaint from the neighbours. We have three schools, the windows of which open into the churchyard, and we all think it a great advantage to have that free circulation of air; we have never in any one instance found any effluvia from the churchyard. On the contrary, it is a decidedly healthy spot.

1449. Sir *William Clay.*] It was from the apprehension that the churchyard was not large enough for the burials occurring in the parish that the new ground was provided?—It was not large enough; it was quite full 40 years ago.

1450. Was there any regulation in the new burying-ground as to the depth of graves?—I believe, in the new burying-ground, in consequence of its being a very heavy, thick clay, the same order does not prevail; but I think they never allow a new grave to be less than 12 feet deep.

1450*. Is there an absence of regulation in that ground as to the distance between a new grave and an old one?—I believe, in consequence of there being more spare ground, they never approach so near; but there is no order.

1451. You cannot state what is the fact?—I believe six inches are allowed between the graves.

1452. Is there any regulation as to the number of coffins which may be put into the grave in the new yard?—No; but there must be a certain depth of earth above the uppermost; I believe that is three feet.

1453. Is there any express plan laid down for proceeding with interments in the new ground, so that the whole may be occupied before the remains are disturbed?—Yes, much more than in the old ground; a clergyman lives there, who is the sexton, and who takes a great interest in it, and makes it as acceptable as he can. I have considered all his arrangements very judicious.

1454. Is that burial-ground equally under your direction, as rector of the parish of St. Giles's, as the old ground?—I think not; because the Act of Parliament put it under the direction of the rector, churchwardens, and certain trustees, who are elected by the vestry.

1455. That cemetery is under the control of a board specially created by the Act of Parliament under which the burial-ground is formed?—Yes.

1456. Have they laid down any plan for interments in that ground?—They have so far laid down a plan as to divide the ground into first, second, and third; I know they have not done what the sexton has done, namely, dividing it; putting against the wall certain marks and numbers. There were some rules printed 40 years ago, but they are totally inapplicable to the present times; the committee meet twice a year or oftener, and visit the ground sometimes, and always examine the state of it; I believe there are no rules except those given *vivâ voce* by the rector, churchwardens, and trustees.

1457. Have any rules been given as to depths of graves, and distance of graves, and so on?—I think I can undertake to say none have been given.

1458. What proportion of this ground is already occupied?—Not nearly half.

1459. How many years has it been used?—Nearly 40 years, but for 30 years out of that period the new burial-ground was comparatively very little used indeed; the objection arose from different circumstances; one was, the facility with which in that district it was supposed the persons called body-snatchers could steal the bodies; and though there were dogs kept on purpose to give notice,

Rev. *J. E. Tyler.*

14 April 1842.

notice, I believe at that time there was some ground to suspect that the bodies were removed, and till about 12 years ago.

1460. At what period did that feeling cease to operate?—It has ceased to operate about 12 years. Attention had been paid to that before the Anatomy Bill, and the ground was growing in popularity before that time; it has been growing in popularity ever since the present sexton was there.

1461. The present average annual amount of burials there is nearly 1,400?—Yes.

1462. Have you any means of forming an estimate as to the rate at which that number of interments is occupying the ground; what space of ground it occupies in the course of the year?—Much will depend upon the judicious management of the ground, and the number of old graves re-opened. If conducted as it has lately been, it would not be fully occupied, as I have been informed, for 50 years.

1463. Lord *Mahon.*] From the evidence you have given, the Committee may conclude that a passage, quoted at page 165 of Mr. Walker's work, and extracted from a weekly newspaper in the month of September 1838, is altogether ill-founded; the passage is this: "What a horrible place is St. Giles's churchyard; it is full of coffins up to the surface; coffins are broken up before they are decayed, and bodies are removed to the bone-house before they are sufficiently decayed to make their removal decent"?—What appeared in the newspaper excited a great deal of anxiety on the part of the churchwardens, who were in town; I was absent for my summer vacation, and they sent to me that paper and another. I thought it of such great importance, that I urged them to spare neither time nor trouble in ascertaining the real truth. The person who wrote that letter signed a name to it, and I think he dated it somewhere near Penton-street, Pentonville; he mentioned also the number of the house. We took the greatest pains possible to ascertain who this person was, and if he was there, that we might have his evidence. We found there was no person known in the whole street of that name; that it was entirely a forgery from beginning to end. We said, We will not rest upon this, if the fact is true we ought to put an end to such practices; and we examined every person who was able to give facts; the undertakers, grave-digger, and sexton, and the vestry-keeper, who could see what occurred, were examined, and there was not a shadow of truth in it; the evidence went point blank to the contrary. A very respectable person of the name of Andrews, one of the most employed of all the undertakers, declared he had never seen anything of the sort, no indecency, nothing improper, and no removal of any body or any coffin. The same sort of attack had been made seven years before, and there was another last year, under the signature of "Anti-Pestilence." It was a mixture, of history, facts, and deductions, all of which were equally false.

1464. Has it ever come before you to receive complaints or to hear information with regard to the abstraction of coffins?—No, I have heard no complaints.

1465. So far as your information goes you have had no reason to believe that in the night coffins have been abstracted from St. Giles's churchyard?—No; I know that some years ago, I believe seven years ago, there were a great many broken pieces which had accumulated, and they were taken away by order of the churchwardens,

1466. Colonel *Fox.*] You never heard of any leaden coffins being abstracted?—No, never.

1467. Do you think there would be any superstitious objection to quicklime being placed in the coffins?—I do not know; it is done on the Continent very much; but I should be afraid there would be objections here.

1468. You are probably of opinion that it would be better to remove grave-yards from the interior of large towns?—Unless they are under very good management; I have often thought, there being very few interments in the course of the year in the city of London, that those grave-yards are beneficial rather than not, because they allow more open space and more circulation of air. I do not object to grave-yards in large towns, if under good management; and should certainly think any compulsory and indiscriminate legislative enactment uncalled for.

1469. Sir *William Clay.*] Have you any vaults under St. Giles's church?—Both under the church, and under the chapel, at the new burying-ground.

1470. Do many interments take place in those under St. Giles's church?—Very few; I should say not above six or eight in a year.

1471. Are

1471 Are those vaults arched?—Yes.

1472. Is the entrance to them within the church?—No, from the churchyard, in the very centre of the side of the church; not near the entrance of the church.

1473. Colonel *Fox.*] Are they ventilated?—Yes; very fairly, I think.

1474. Do not you apprehend that the ventilation is a bad thing for the public?—No; I have not found that. In the course of 16 years I have not heard of anything unpleasant arising more than twice, and that was immediately stopped.

1475. Mr. *Ainsworth.*] Have you many vaults in the new burying-ground?—Not many.

1476. How do you reconcile the statement made in Pennant's History of London with reference to the condition of St. Giles's churchyard?—I have not the least doubt it was so in former times; it would be ten times worse in that time than it is now; in those days the whole of St. George's Bloomsbury belonged to St. Giles's; the very preamble to our Act of Parliament establishes the fact of the crowded state of the churchyard.

1477. Lord *Mahon.*] Have you any observation to make with reference to the remarks of Pennant, in his account of London, in page 157: "I have," says he, "in the churchyard of St. Giles's, seen with horror a great square pit, with many rows of coffins piled one upon the other, all exposed to sight and smell; some of the piles were incomplete, expecting the mortality of the night. I turned away disgusted at the view, and scandalized at the want of police, which so little regards the health of the living as to permit so many putrid corpses, tacked between some slight boards, dispersing their dangerous effluvia over the capital, to remain unburied"?—What took place in Pennant's time I have no means of ascertaining, but a total change had taken place, I believe, long before I came to London.

1478. *Chairman.*] You state that the churchyard of St. Giles's is not full; how do you account for its being so much raised above the level of the street?—Because interments have been going on for centuries. In the preamble to our Act of Parliament it was stated that they had, at a very great expense, brought in a great quantity of new earth to cover the ground.

1479. Assuming that by any legislative enactment you were prevented interring in the churchyard adjoining the church, would any pecuniary loss be incurred by you, or any inconvenience suffered?—A very great pecuniary loss. Our diocesan, the Bishop of London, sent a circular round to all his clergy, previously to this present Session of Parliament, requesting them to state the average amount of the fees for the last three years, which I took great pains to send accurately to him; I understood that it was with a view of submitting it to Parliament.

1480. If no pecuniary loss has been incurred by you by the new burying-ground, why should you fear that you will sustain a loss from carrying it further?—The new burying-ground has been of great service to me; it is the only thing which has kept up the living, for our burials round the church have fallen off; I do not say that I should lose all derived from that source now, but nearly all; for when the old burial-ground was shut up, (as it was for 20 years, except in the case of those who could prove that their families had been buried there before,) they did not go during these 20 years to the new burying-ground, but they went to other places. The Roman-catholics liked the old ground, because it was consecrated by a Roman-catholic bishop; now they would not go to the new ground, they would go elsewhere.

1481. You think that in case of interments in the old burying-ground being prevented, they would not go to the new burial-ground?—Some, perhaps, might, but most would not; I should certainly be a considerable loser.

1482. Lord *Mahon.*] You say you would suffer a great pecuniary loss from persons being debarred of the churchyard; but supposing the same Act were to prohibit interments in other churchyards as well, would you not be quite free from pecuniary loss?—I must say, that if the bodies were sent out from London, and were buried in my cemetery, in all probability that would compensate for more than I should lose; but this is not at all probable.

1483. *Chairman.*] If there was a general enactment, instead of a local one, do you think there would be no loss to you?—Provided the new cemetery was not included in the general enactment; but that is now in the midst of houses, though it was not originally.

Rev. *J. E. Tyler.*

14 April 1842.

1484. Mr. *Ainsworth.*] Do you allow interments of bodies not of your parish?—Yes, a great many.

1485. It is open to all?—Yes.

1486. *Chairman.*] The letter of the Bishop of London to the clergy of his diocese, merely put a particular case to them of interments not taking place in their churchyards, without putting the general position?—The question of the Bishop of London was merely as to the amount of fees received for burials during the last three years, specifying those that were for burials in the churchyards and in vaults, and also from mural tablets, and so on.

1487. Sir *William Clay.*] Do you find that the poorer classes of your parishioners are in the habit of attending the burials of their friends in the new burying-ground?—Yes, to a very considerable extent.

1488. Do you think the distance from the parish church operates to prevent their doing so, or that it is attended with inconvenience?—I should think so, from the numbers; the numbers that attend an Irish funeral in the churchyard are sometimes very inconveniently large indeed.

1489. The Irish burials principally take place in the old churchyard?—Yes.

1490. As far as you know, is the distance of the new churchyard from the principal part of the parish felt to be a hardship or inconvenience?—No, certainly not; because they have now the option of coming to the old burial-ground; but were they deprived of that option, they would think it a hardship.

1491. It is perfectly at the option of all classes of your inhabitants to have their friends interred in the old or in the new?—Yes.

1492. Colonel *Fox.*] The majority prefer the new?—No, I believe a great number of those not to be parishioners, but from St. Pancras parish, from Islington, and from the neighbouring parishes round.

1493. Sir *William Clay.*] Has St. Pancras any burying-ground?—I am not aware they have any except that round the old church, and under the new church, and district chapels.

1494. You think that with respect to your own parish the majority of burials in humble life takes place in the old churchyard?—Yes, I should think so, with the exception of the paupers from the workhouse, who are buried in the cemetery.

1495. You would infer from that perhaps that the distance of the new churchyard was felt to be an inconvenience by the poorer classes?—I can scarcely say that. We must take into account the other motives I have mentioned, such as their wish to be buried in a ground consecrated by a Roman-catholic bishop, and long custom.

1496. Lord *Mahon.*] May there not be another motive, that the fees for interment are much lower in the churchyard than in the cemetery?—The fees in the cemetery are very various; but in what is called the public ground in the cemetery, they are lower than in the churchyard.

1497. At page 232 of Mr. Walker's work, there is this statement; is it correct, as far as your observation and experience goes: "It has for a long period been, and now is, the custom in a majority of the burying-grounds belonging to the establishment, to impose double burial fees upon extra-parochial dead"?—Yes, generally we do that in the old burial ground; but we do not now in the cemetery, in the third or common ground.

1498. How many years has the old ground been re-opened?—It was re-opened about 1824, or 1825; it was very shortly before I came into the parish.

1499. What is the average of interments in that ground?—It would not be fair to go through those years, for they came back gradually; they had been in the habit of going to other grounds.

1500. Do you suppose there have been 300 buried each year?—Yes, I should think the average would be hardly less than 400; there may have been 500; seven or eight years ago we buried a great many more than we do now.

1501. That would make 6,800 in two acres of ground; how can that number be put within that time into two acres of ground?—I cannot reckon so; the majority of those were children, and four children would go where one grown person was buried; there are also six or eight in one grave; besides, the bodies buried there in 1827 and 1828 would have been decomposed, and the coffins entirely rotted before this time; it is entirely on gravel.

1502. It would be dug up again?—Yes; I am informed that, in the new burial-ground, it would not be in so short a time, because that is clay, and the decomposition of the human frame does not go on so rapidly.

1503. Sir

Rev. *J. E. Tyler.*

14 April 1842.

1503. Sir *William Clay.*] Do you think it is at all generally known that the remains of persons interred in London churchyards are not left undisturbed for so long a time as 12 years?—Twelve years was, I think, a shorter time than the fact; but I believe it is very generally understood that they are decomposed within 14 years; still I think it very undesirable that they should be removed.

1504. *Chairman.*] You account for 6,800 bodies being placed in 17 years, from the circumstance that those bodies which have been interred in the early part of that time have decayed?—Yes, such is the fact.

1505. Sir *William Clay.*] It would appear, from the estimate you have given to the Committee, the annual amount of burials in St. Giles's old churchyard is more than you would consider proper and decent?—No, I do not see that inference at all, for a great portion of the soil has never been touched for nearly the last 40 years; there was a great anxiety to deposit the bodies in the front of the churchyard; I have no doubt the bodies having decayed that ground was made use of again, whereas ground which had not been made use of during 30 years behind the church was not touched, and is still quite free for proper interments.

1506. You do not know in what period of time, on the average rate of burying in the old churchyard, the ground would be again occupied?—No; but I have been in the habit of asking, "If we go on at this rate, will not the ground be soon full?" and I have been answered, "No, the ground will never be full."

1507. Mr. *Cowper.*] Do you believe it is generally known by the relatives that the bodies do not remain longer?—Yes. The bodies are never disturbed; only, when decomposition has entirely taken place, the bones which are found when the ground is dug again for a new interment, are re-interred.

1508. Within the period of 20 years the coffins are broken up?—No; they are entirely rotted, and disappear in that time.

1509. How is it with regard to the leaden coffins?—We never allow leaden coffins to be buried in the churchyard.

James Anderton, Esq. called in; and Examined.

J. Anderton, Esq

1510. *Chairman.*] WHAT situation do you fill in the City?—I am one of the Common Council.

1511. Have you turned your attention to the state of the churchyards in the metropolis?—I have, but more from report than from personal inspection of them, perhaps.

1512. Will you have the kindness to state to the Committee what has come under your observation?—With regard to St. Martin's, Ludgate, they have no churchyard attached to that, and they have been obliged to bury under the church, and paupers I believe have been buried there in common wooden coffins; a very short time ago the church was under repair, and I observed them carting away pieces of the decayed coffins, and bones and ashes by cartloads.

1513. Were the bones quite dry?—Yes, quite dry; I have no doubt they had been under the church a great many years; that is in the very heart of the city, on Ludgate Hill; I believe that the attention of the Bishop of London was called to it, and that he directed that no further interment should take place under the church.

1514. At what period was this?—Within the last few months.

1515. Was there any offensive effluvia?—Yes; so bad that I was going down into the vaults and I returned again.

1516. Do you consider that effluvia injurious to health?—I have no doubt of it.

1517. What is your opinion of the general state of the churchyards in the metropolis?—My opinion is that they ought not to be permitted to exist any longer, that they are disgraceful to us as a civilized country.

1518. Is there a strong feeling against the interment of bodies in the city?—I think it is general.

1519. As being unhealthy and injurious?—Yes; the churchyards not being sufficient to contain the bodies.

Mr. *George Starkins Wallace,* called in; and Examined.

Mr. *G. S. Wallace*

1520. *Chairman.*] IN what profession are you?—I am a livery-stable keeper, in Whitechapel.

Mr. *G. S. Wallace.*

14 April 1842.

1521. Sir *William Clay.*] Will you have the kindness to state anything which comes within your knowledge on the subject of the investigation before this Committee?—The custom of burying in open graves in the parish of Whitechapel we consider to be a great nuisance; within these two months four pews have been disturbed, and bodies placed under the pews at about four feet from the flooring. In removing the ground, I saw several other bodies lying within three feet of the flooring of the pews, without any arch or any covering, further than the coffin.

1522. You speak now of the area of the church itself?—Yes.

1523. Were those graves under the pews or under the aisle?—Under the pews, and dug so close to some of the columns that support the roof, I consider it very likely to endanger the building.

1524. How long is it since those interments took place?—The last I am speaking of took place about six weeks back; the two others, which lie near the same spot, were buried in the year 1825.

1525. There was nothing, in short, between the persons occupying the pews in the church and the dead bodies, but from three to four feet of earth, and the boarding of the floors of the pews?—Just so.

1526. Can you state to the Committee how many interments take place on the average of years, or in a given time?—I understand about three a year in the church.

1527. How happens it that there are so few; are the fees higher?—The fees are considerably higher.

1528. What is the size of Whitechapel churchyard?—Whitechapel churchyard should be divided into three parts: there are two parts leasehold and one part freehold; one part of the churchyard was leased for 56 years, granted in 1791, so that it has but five years before the lease is out; the other part is leasehold for 300 years from Midsummer 1728, so that there are about 186 years of that remaining; the third part is freehold.

1529. Can you state the respective proportions of each of those?—Yes; the part which was leased in 1728, is about 160 feet by 79; the freehold part is about 260 feet by 63; but then the dimensions of the church are included in that, which is 77 by 60; the remaining part, which was granted in 1791, I have not the dimensions of, but I should say it is about one-fourth of the other part of the leasehold; that is considerably the smallest portion.

1530. Have burials gone on, and are they now going on in the last-named portion of the leasehold?—No, they have ceased for some few years.

1531. For how long?—I should think for the last 12 years.

1532. From the impression that the remains will be liable to be disturbed, from the ground falling in on the termination of the lease?—Yes, and the doubt whether we can purchase it; we have the power of purchasing it by a Local Act of Parliament at any period, but it is in Chancery, and there is some difficulty as to arranging the purchase.

1533. Supposing the purchase not to be effected, the ground would revert to the proprietor for any purpose to which he chose to employ it?—Yes.

1534. Do you know the extent of the churchyard?—I think in the freehold there is about 11,760 square feet; I think the other is rather larger.

1535. What are the number of burials in the course of a year in the churchyard?—I understand from our parish clerk he considers the average about 200.

1536. Are you aware of any regulations as to the number of coffins to be put into graves, and the depth to which the graves must be dug?—Of late years graves have been dug much deeper than formerly; I cannot state the depth.

1537. Are you aware of any regulation as to the depth of earth on the last coffin?—I am not aware of any whatever.

1538. The Committee presume that, as in other burial-grounds, more than one coffin is put into each grave?—Yes, a great many; you cannot open a grave without opening it by the side of other coffins; I should say as much as 10 years ago the parishioners considered the churchyard full, and were in treaty for an adjoining piece of ground, which is now a timber yard, but the purchase of it went off, for two reasons, one was their wanting a larger sum of money than we thought it was worth, and another cause was that we considered we were contributing to the interests of Brazennose College, without their contributing to the burial-ground.

1539. Are the Committee to understand that new graves are opened so near

to

to the old graves as to discover the coffins in the old graves?—Most certainly; we see the sides of them almost in every grave I have seen opened. Mr. *C. S. Wallace.* 14 April 1842.

1540. How near to the surface is the last coffin placed in one of those graves before it is considered full?—That will depend on circumstances; but I should say the ground seldom covers them more than three feet.

1541. You have stated that the inhabitants of the parish considered 10 or 12 years ago, that the grave-yard was full; that impression since is more strong, probably?—Certainly.

1542. Do you consider that there would be a desire on the part of persons residing in the parish to concur in the providing of a fresh burial-ground?—I can hardly answer that question; as to their feeling 10 years ago, they were anxious to get this piece of ground; they would have given a liberal price for it; but they considered that as Brazennose College would partake of the benefit, they ought to contribute a portion of the expense.

1543. Do you think there is a strong feeling on their part that a new grave-yard should be provided, and that it would be beneficial?—I have no doubt of it; they are relieved in a great measure lately by the provision of two new cemeteries within two miles of us.

1544. Supposing any legislative facilities were given to the parish to procure a burying-ground elsewhere, do you think the feeling of advantage of the inhabitants of Whitechapel parish is such that they would be disposed to raise money, and go to the expense of providing a fresh ground?—I think they would; a short time ago they were all well disposed to it, but they have now other cemeteries in their neighbourhood.

1545. Are the charges in these cemeteries greater or smaller than in your parish?—I cannot say.

1546. Is the new cemetery in the Tower Hamlets opened?—Yes, that is the cemetery near Bow: that was opened about a year and a half ago for interments.

1547. Do many interments from the parish of Whitechapel take place in that cemetery?—That I cannot say.

1548. You do not know whether the circumstance of opening that cemetery has decreased the number of burials in Whitechapel ground?—I am not aware that it has; there is another burying-ground, called Sheen's burying-ground opened some years ago; that I understand from the rector reduced the number of burials considerably.

1549. Do you live near the church?—Yes, close by.

1550. Have you been aware of any unpleasant effluvia from bodies buried in the churchyard?—I am not aware of any; our churchyard is rather open.

1551. Have you heard of any such complaints being made by your neighbours?—I have not.

The Rev. *John Channing Abdy*, called in; and further Examined.

1552. *Chairman.*] WILL you have the goodness to state to the Committee what has come under your personal knowledge as to any burial-ground in the parish of St. John's, Southwark?—There is a ground, called Butler's-ground, in the parish of St. John's. What I have to state in reference to that ground is this, that it is the property of a private individual, who is an undertaker, not belonging, of course, to the church, nor to any sect, but a private speculation, and, as such, I cannot but deem it subversive of all order and propriety with regard to the burial of the dead; and further, I conceive that the mode of interment in one part of this place is decidedly objectionable, on the ground of health; he has what he terms a vault, which runs under four houses; in that place which he calls a vault, he places the bodies of the dead, which are simply in coffins without lead. Rev. *J. C. Abdy.*

1553. Mr. *Ainsworth.*] Were those vaults originally the cellars of the buildings or houses?—I am not prepared to say whether they were originally cellars, or were built at the same time that the houses were, for the purpose of vaults.

1554. Mr. *Cowper.*] Do you know whether the houses have any cellars?—They have no cellars.

1555. At what distance from the floor of the houses are the vaults?—Immediately under the flooring.

1556. Do you know what depth of ground intervenes?—I do not; but I am

Rev. *J. C. Abdy.*

14 April 1842.

given to understand that there is a brick-work between the flooring and the building of the vaults.

1557. Are you aware whether the inhabitants of those houses perceive any effect from the burying of those corpses underneath their houses?—I am not.

1558. Is the vault under all the four houses?—Yes.

1559, Mr. *Ainsworth.*] Is there any mould, or does the arch of the vault come up to the floors of the rooms?—I do not know.

1560. How long has this burial ground been made?—I should apprehend 20 years, more or less.

1561. Who is the officiating minister?—Of course there is no minister; the person improperly called a minister is only the undertaker's man, who acts on other occasions as a porter.

1562. Does he read the service of the Church of England?—He reads the service, but I think profanely, because not being a clergyman, he has not any official authority to read such service; he also wears a surplice, and there is a house in this same building called the minister's house, deceiving the people under the idea that they are going to be buried in a consecrated ground.

1563. *Chairman.*] Do you suppose that those whose friends are to be buried imagine him to be a clergyman of the Church of England?—Many of them do, I have no doubt.

1564. Sir *Wm. Clay.*] Do you know the charges which are made for burial in this cemetery?—The ostensible charge for fees is somewhat lower than those demanded by the church.

1565. Is there any other circumstance you would wish to state?—When I had the honour of appearing before the Committee last I made a statement, which I have read over, and which is perfectly correct; but I thought it my duty, after having given the evidence I did, as late curate of the parish of St. George's, to see the rector, who is now present, and the remark I have to make in consequence of having seen that gentleman is, that though I stand completely firm as to the accuracy of what I stated of things existing when I was curate, I am given to understand that things are very different now.

The Rev. *John Houghton*, called in; and Examined.

Rev. *J. Houghton.*

1566. *Chairman.*] YOU are Rector of St. George's, Southwark?—I am.

1567. Will you have the kindness to state any information you are able to give on the subject now before the Committee?—With reference to the vaults under the church, I have been frequently into the vaults and I never perceived any unpleasant effluvia to arise from what had been interred there; I have one of my own children buried there; had there been anything of the kind, I certainly should not have done that.

1568. Does the opening into these vaults go from the church, or is it from any aperture outside?—In the inside of the church.

1569. Mr. *Ainsworth.*] How is it closed up?—By a door.

1570. Is the vault ventilated, outside?—Yes, very well ventilated by apertures on both sides.

1571. Is the vault bricked and arched?—I believe it is.

1572. *Chairman.*] Have you never perceived any smell in the church?—No.

1573. How many dead bodies may there be?—I am really unable to answer with accuracy; there are a great number.

1574. Does it not appear remarkable that that large number should be there without any smell?—There is not the least smell; they are all interred in lead; none are allowed to be interred there without lead.

1575. Mr. *Ainsworth.*] What size is your churchyard?—We have within a few years had it very much increased in size, in consequence of the old churchyard being supposed to be full.

1576. How have you enlarged it?—By pulling down houses.

1577. Have you purchased land?—Yes.

1578. How has that been purchased?—By the parish.

1579. *Chairman.*] Out of what fund?—By annuities; we have sunk a certain sum of money, and they were allowed a certain interest, according to the age of the individual; it was met by a rate on the parish at large.

1580. Was

1580. Was it a special rate for that purpose, or taken out of the poor's rate?—A special rate for that purpose.

1581. To what amount in the pound?—Many of the annuitants have died off; it is comparatively small now; the church rate and that together do not amount to 2*d.* or 2½*d.* in the pound.

1582. Mr. *Ainsworth.*] Was there any objection to levying this rate?—It was levied under a local Act of Parliament.

1583. *Chairman.*] What is the date of that Act?—I cannot at the moment answer that question.

1584. How many years has the new churchyard been made?—From 25 to 30, probably.

1585. What is the size of your burial-ground, including this new ground?—I have never measured it, but I should think about an acre and a half.

1586. Is it very full?—The old ground was supposed to be full when the new ground was purchased, but no one has been interred in the old ground for the last 16 years, excepting here and there where their friends had been buried, and the graves have not been full.

1587. Assuming an Act of Parliament was passed prohibiting the burial of the dead within the precincts of this town, is it your impression that a rate of 1*d.* in the pound would be sufficient to make compensation to the clergy for any loss of dues, and the purchase by the parish?—I should think not; for, in the first place, my stipend, which is 480*l.* a year, is also paid out of that rate which I have alluded to of 2½*d* in the pound.

1588. That is sanctioned by an Act of Parliament?—Yes, in lieu of tithes and Easter offering; the 80*l.* is instead of a house; the parish have the option of building me a house if they think proper; if that house should be built, I should relinquish the 80*l.* a year.

1589. Is there any particular thickness of lead required by custom for the coffins?—It is not lead alone; it is always deposited in a wooden coffin; I do not know the thickness of any except that of my own child, which I should think was about a quarter of an inch thick; I do not know whether the coffins of grown persons are made thicker.

1590. Is it milled or cast lead?—That I am not able to say.

1591. Do you know whether the gas generates and finds a vent?—I do not think it is possible for any vent to exist in those which have been interred in my own vault; I have gone down repeatedly and never found any inconvenience.

1592. Mr. *Ainsworth.*] How many interments have you in the vaults in the course of a year?—Perhaps not more than 40 in a year.

1593. You charge extra price for interment in the vault?—Yes; there is only one part belongs to myself, the greater part belongs to the parish.

1594. Do the parish charge the same fees as you do?—More.

1595. What is the state of the new burial-ground?—There is a considerable portion of that where no individual has been buried.

1596. What is the average number of interments in your ground in the course of a year?—The last year there were 535, but that includes the number in the churchyard adjoining the church, in the vault, and also what have been interred at a burial-ground called the Lock burying-ground, which is in the Dover Road.

1597. Can you state the number interred in your ground adjoining the church?—I should think not above one-half.

1598. Is the Lock burying-ground under your control?—Yes.

1599. Was the land of the Lock burial-ground purchased in the same manner as the addition to the churchyard, by a rate?—I have heard that the ground was left to the parish.

1600. *Chairman.*] What should you say is the whole number of coffins which have been laid in your churchyard?—I am unable to answer that.

1601. Taking the number at 250 per annum, for how many years has that been the number?—I should think not more than two years.

1602. How many were interred previous to that time?—During the time of the cholera there were as many as 1,260.

1603. For how many years has this grave-yard been opened?—From 25 to 30.

1604. What should you say was the average?—I should think it might be more than 700.

Rev. *J. Houghton.*
14 April 1842.

1605. Taking 700 for 20 years, that would be 14,000 bodies; how can that number be placed in a space such as you mention?—We are enabled to go very deep in that ground, as much as from 18 to 20 feet deep.

1606. Is it dry?—Yes.

1607. The Committee hear that the Lock burying-ground has been in a very bad state?—It is in a much better state than it was, in consequence of a sewer having been carried up the road, that enables them to go much deeper than they could formerly.

1608. What was its state formerly?—They could not go more than six or seven feet before they came to water; the sewer has drained it, and they are enabled to go as much as 14 or 15 feet.

1609. How many coffins have been placed in that ground?—I should think about half the number I have mentioned.

1610. What is the size of it?—It is not so large as the other ground; I should think about a quarter of an acre.

1611. About 7,000 bodies have been buried in that?—Yes, probably.

1612. Mr. *Ainsworth.*] You say you have a great deal of room still left?—Yes.

1613. Can you say how much; have you a third?—I should think more than that.

1614. Two-thirds?—Yes, nearly so.

William Miller, called in; and Examined.

William Miller.

1615. *Chairman.*] WHAT is your occupation?—A jobbing, labouring man, when I can get anything to do.

1616. Have you been a grave-digger in Globe-fields, Mile End?—Yes.

1617. Is that a private burying-ground?—Yes.

1618. To whom does it belong?—Mr. Thomas Tagg.

1619. Whereabouts is it situated?—On the left-hand side of Mile End, going up Globe-road.

1620. Have many pits been dug in it for the depositing of bodies previously interred?—Yes.

1621. Where did they come from?—Out of coffins which were emptied for others to go into the graves.

1622. Where did they come from?—From Globe-fields.

1623. Were the coffins chucked in with them?—No; they were broken up and burnt.

1624. Were they bones, or bodies, that were interred?—Yes; the bones and bodies as well.

1625. Were they entire, or in a state of decomposition?—Some were dry bones, and some were perfect.

1626. Were they bodies?—Yes.

1627. What did you do with them?—Chucked them into the pit.

1628. What sort of pit?—A deep square pit, about four feet wide, and seven or eight feet deep.

1629. How many bodies did you chuck in?—I cannot say, they were so numerous; each pit would hold about a dozen.

1630. How many of those pits did you dig?—I suppose I dug a matter of 20 myself.

1631. Do you mean to say you filled them all with dead bodies?—Yes; with dead bodies and bones.

1632. How near to the surface of the earth did those dead bodies or bones come?—Within about two feet.

1633. Mr. *Ainsworth.*] With what did you cover them?—With earth.

1634. With nothing else?—No.

1635. Mr. *Cowper.*] You did not put in any quick-lime?—No.

1636. Sir *William Clay.*] Those bodies were taken out of the graves in this burying-ground?—Yes.

1637. That was to make room for other corpses?—Yes.

1638. What is the size of this ground?—It is rather better than half an acre.

1639. *Chairman.*]

William Miller.

14 April 1842.

1639. *Chairman.*] How many bodies are buried in that ground within a year?—I cannot say; I suppose there are 14,000 have been buried in that ground.

1640. How long has it been open?—Since the year 1820.

1641. Do you recollect any circumstance which occurred there about the month of October 1839?—Yes.

1642. Will you state it to the Committee?—Some boys were at work there; a policeman on the railroad happened to see them in the act of taking some bones out of baskets, and got a policeman in the police force of the metropolis, and sent him in and seized the boys with a bag of nails and plates off the coffins, going away to sell them, and going to sell the bones.

1643. To what purpose are the bones applied?—I do not know.

1644. What is done with the wood of the coffins?—Burnt for their own private use.

1645. By whom?—By the sexton.

1646. Sir *William Clay.*] Supposing it is a lead coffin, what is done with the lead?—They never come athwart any of them there.

1647. Mr. *Cowper.*] When this wood is burnt, do you observe any peculiarity about it?—Yes; I have seen the smoke come out of the chimney, and it has smelt like a piece of meat roasting.

1648. Is it burnt in the sexton's house?—Yes.

1649. Sir *William Clay.*] What was done with the iron or metal handles of the coffins?—They were burnt on the coffins when I was there, and were thrown out among the ashes about the ground anywhere.

1650. Within how recent a period after the interment have you known a coffin to be disturbed?—About 14 years.

1651. Never less than that?—No.

1652. How does that agree with what you have stated, that you have known a body come up quite whole; do you think a body will last 14 years?—Yes, where it is quite damp.

1653. Mr. *Ainsworth.*] Who performs the burial-service over the dead?—A gentleman of the name of Cauch.

1654. Does he reside there?—No, he resides opposite.

1655. What is he?—I do not know that he is anything; he has formerly been a shoemaker.

1656. Does he put on a gown when he buries the dead?—Yes, a surplice.

1657. What service does he read?—The regular church service.

1658. *Chairman.*] Have you been through Stepney churchyard?—I have been through the churchyard, and have seen scull-bones and arm-bones and teeth lying on the surface of the earth.

1659. Are there sheep feeding in the yard?—Yes, I have seen sheep in the yard.

1660. Have you ever seen children playing with the bones?—Yes, I have.

1661. Do you know Bethnal Green churchyard?—Yes; I have been there, and have been horrified with what I have seen; I have seen them cut through coffins, and blood and corruption on the surface of the earth.

1662. What is the condition of the earth?—It is half human ashes and coffin dust, and the like of that.

1663. Do you know Limehouse churchyard?—Yes; I have been through there, and have seen them take the pieces of coffin away into a sort of square door at the side of the church.

1664. Have you seen any particular sort of maggot creeping about those churchyards?—Yes, I have seen nasty great black things as big as my finger crawling about, and when the sheep are grazing they are in the habit of picking them up and chewing them as well as the grass.

1665. Were you in the habit of performing this grave-digging without the use of spirits?—No; we were obliged to be half groggy to do it, and we cheered one another and sung to one another.

1666. You found the work so disgusting you were obliged to be half drunk?—Yes.

1667. Has it been a regular practice to chop up the bodies?—Yes; in several places, where they come athwart of them, they cut through what comes before them, and turn it all out.

William Miller.

14 April 1842.

1668. When you come to a coffin, when you find a difficulty, do you cut the body through?—I have known them cut a body through, leave half in the coffin, and chuck the other half out.

1669. Have you been affected in your health at all?—Yes, with sickness and dizziness in the head, in this sort of work, and a failing in the knees.

1670. Do you remember anything of a grave-digger, a fellow-workman of yours, called Michael Cormack?—Yes; he was digging a grave one Sunday afternoon, a very small one; I was there myself; he had not been above three minutes before he came scrambling up; I had laid down on my belly to pull him up; he was some minutes before he came to; he was quite black in the face in consequence of the foul air; I got half way down, but I could not venture any further; we opened that several times, but it was the same again.

1671. Mr. *Ainsworth.*] Can this bad odour be removed, or should you fill up the grave again?—We fill them up and open them again, and run all chances.

1672. Do you take any means to burn them out?—No; we take them as they come.

1673. *Chairman.*] What is the size of Limehouse churchyard?—I cannot exactly say; I suppose, take it altogether, it is nearly an acre.

1674. How many bodies do you think have been interred there?—I am sure I cannot tell; there are a great many headstones and bodystones.

1675. Is there a vault under the sexton's house in the Globe Fields?—Yes.

1676. Did the sexton die suddenly?—He was bad a few days; about three or four days.

1677. Do you remember any other persons being affected with the smell?—Yes; a young man from Stepney went there; he had rather a phthisicky cough when he went there, but nothing to speak of; but after he had worked there some time it increased upon him; he was there about 12 months, and he got so bad, he went off like the snuff of a candle.

1678. Mr. *Ainsworth.*] Was he a grave-digger?—Yes.

1679. How many years was he employed there?—About 12 months; but he was formerly a grave-digger at Stepney; they carried on a horrid system there.

1680. *Chairman.*] How near to the surface of the ground are there any coffins?—There are some within six inches; I could find many within the breadth of a spade.

1681. Mr. *Cowper.*] What were the fees?—Ten shillings for a grown person is the cheapest, and five for a child.

1682. What pay did you receive for this work?—My work was day-work; I was paid 2*s.* a-day, and as much beer as I could drink.

1683. *Chairman.*] How did you get acquainted with this sort of work?—I was out of work, and a young man there asked me if I wanted a job; I said yes, and he said the sexton could give me a job, and he set me to work.

1684. Mr. *Cowper.*] Have you worked at it every day in the week?—No; I have been off and on five years.

1685. *Chairman.*] What quantity of spirits do you take before you begin this work?—A quartern of gin and a pot of beer and a pipe of tobacco, and then my blood begins to flow.

1686. Mr. *Ainsworth.*] You say you received 2*s.* a day; has that been your pay since?—No, I was quite a youth then.

1687. Do you receive more now?—Yes; I receive now sometimes 8*s.* a day, but I am not on that work now.

1688. What did you receive at other grounds?—In some places I had the pay of 1*s.* a foot, and in some others 3*s.* a day.

1689. *Chairman.*] Did you not feel rather awkward at this kind of work at the beginning?—Yes, I used to stand and tremble; I could not stomach it at all.

1690. Mr. *Cowper.*] Did you ever use a rope in removing the bodies from one part of the ground to another?—Yes; we used to get a rope, and put it round the bodies' necks, having first taken off the lid of the coffin, and then we dragged them by the rope, and sometimes the head would come off, and the trunk would fall down again, then we used to go down and fix it round the body and haul it up that way; and sometimes it was so tight we could not get it off again.

1691–4. *Chairman.*] Has it ever occurred to you, when a man has been digging

William Miller.
14 April 1842.

ging a grave, to have seen him up to his knees in slush and bloody matter?—Yes; I have seen an old sexton up to his knees in blood and slush, and so on, and I have come down and said, for God's sake get out, it will kill you; this was in Globe-fields. There was another man, of the name of Michael Dormer; I suppose that was the occasion of his death; he died in the prime of life; he used to dig graves, the bloody corruption used to run down by the sides of the graves; on a sunshiny day when he came up the stench was horrid.

1695. Sir *William Clay.*] When you were digging a new grave, what you call corruption used to run from the old grave very near it?—Yes.

1696. How near did you use to dig the new grave?—Close by the side of the old one; I have been down, and have had six or seven and thirty coffins round me, all bare and all fresh.

1697. Mr. *Ainsworth.*] How could you bear the smell?—I could not bear it at all, but I was obligated to it; there were sides, and head, and foot, one a top of the other, and buried, I suppose, within about 12 months.

1698. Mr. *Cowper.*] In what churchyards have you seen the maggots?—In Globe-fields.

1699. Any other?—Yes, in Stepney; and I have seen the sheep grazing among them.

1700. Have you seen them in the winter as well as the summer?—No, the winter kills them; they are coming on now as the warm weather comes on.

1701. Are they in any number?—Yes, in numbers; sometimes according to the soil, and the stuff they have turned out.

1702. Do you mean that the sheep have swallowed them?—They have, no doubt, chewed them and swallowed them.

1703. Is there any other circumstance you have to state?—There was a man who used to have the liberty of cutting grass in Globe-fields; he took the grass to his cow, about two arms full of this grass; in the morning she was very bad, and in a few hours she was dead, and it was supposed it was in consequence of the matter in that she had eaten.

William Ford, called in; and Examined.

William Ford.

1704. *Chairman.*] WHAT is your situation?—I am beadle of the parish of St. Martin's, Ludgate.

1705. You are aware that this Committee is appointed for the purpose of inquiring into the expediency of altering the system of interments in large towns?—I understand so.

1706. Will you state to the Committee what you know upon the subject generally?—The burials of our dead are all in vaults, we have no burying-ground whatever.

1707. How long have you been employed in your present capacity?—As beadle I have been only since Christmas, but I have been connected with the parish, and have had to do with the vaults for 20 years past.

1708. What is the size of the parish vaults?—We have various vaults; there is one about 41 feet long, another about 30 feet, another 25, and another about 13; I think there are five in all; the measure of them all is about 123 feet.

1709. How many bodies do they contain?—I should think they may contain 400 or 500.

1710. Have you ever observed any smell or effluvia arising from them?—We have frequently had smells arising from the vaults; more especially, I think, in damp weather or warm weather.

1711. Did you ever clear a vault from its contents in order to place other bodies in it?—I have on two occasions; the mode of doing it was to bury the bones and put the wood that was not entirely rotten between the other coffins, or make a place and throw them behind, and then to carry away what was entirely decayed, or what was reduced to that state.

1712. Is this a common practice?—It is the practice I have been directed to follow on two occasions.

1713. You remove the decayed bodies and the coffins for the purpose of making room for more?—Yes.

1714. If that was not done you could not place more in?—They have considered

William Ford.

14 April 1842.

dered some of the vaults sometimes full; we have been getting full latterly, but not so much but that we could have gone on two or three years, but it became necessary to remove the corrupt matter that had accumulated, the coffins tumbling one on another.

1715. You stated just now that it was only dust, but now you state that you remove the corrupt matter; how do you reconcile those two answers?—The latter vault I had to clear was very damp and wet, it was nothing more than its being wetted by damp getting in.

1716. How many cart-loads did you carry away when you cleared out the vault?—I think there were about 10.

1717. Mr. *Ainsworth.*] Where did you take it to?—I am not aware where it was taken; it was taken away during the repairs of the church by the contractor who repaired the church.

1718. *Chairman.*] Have you many crowded courts and a poor population in your immediate neighbourhood?—No, not to say close; there are numerous inhabitants, certainly.

1719. Do you consider that this smell you have mentioned is injurious to their health?—It did not affect any one that I am aware of out of the church, we have a passage leading from our church to the vestry; we have no communication from the vaults to the church; it is in the passage leading from the church to the vestry where the opening is.

1720. When that is opened, does any effluvia arise?—Sometimes.

1721. Are the vaults dry?—One or two are very dry; there are flues like chimneys in the vaults.

1722. Have you confined your attention to St. Martin's, Ludgate, or does your information of the City lead you to state that there are other churchyards you know which are over-crowded with bodies?—I know nothing of any other that I can speak to.

1723. Mr. *Ainsworth.*] How long is it since the vaults were cleared?—The last clearing was last Autumn—last October; I think at that time there were 10 cart-loads taken away, to the best of my remembrance.

1724. Do you allow any interments in wood, or do you require them to be in lead?—Having no other burying-place we are obliged to permit interments from our parish in wood, but we require, that if we receive any stranger, to be buried in lead.

1725. Supposing they are interred in lead, do you remove the coffins at any time?—No.

1726. Has the Bishop of London made any remark on the interments in the church of late?—I have heard so; it has come to my knowledge that he has made a remark.

1727. Have you continued to bury in your vaults since that remark?—Yes, we have no other place to bury in.

1728. Have you buried there within the last month?—Yes; we have no other place for burying but that.

1729. Do you still take in bodies in wood?—Yes, it has been held by our parish authorities that we cannot avoid it.

1730. By what parish authorities?—By the churchwardens.

1731. Has that been communicated to the Bishop?—I cannot say; our orders are not to receive any, not inhabitants, unless in lead.

1732. The congregation have never complained of any effluvia from the vaults?—I am not aware that they have.

1733. Who is the clergyman who performs the duty there?—The Rev. Mr. White, one of the Masters of Christ's Hospital, he is the curate.

1734. *Chairman.*] Has your clerk any connections buried in the vault?—His father and mother, and late wife lie buried there.

1735. Did he take any precautions in consequence of the fear that their leaden coffins might be carried away?—They were not buried in lead, but he has had fresh shells put in, with a view to preserve their remains when they begin to decay.

1736. Were they taken out of the earth?—They are not in the earth, they are piled on one another.

1737. Supposing a greater decomposition takes place in one than in another, what is done?—The other ones are generally sufficiently firm to support all behind them.

Mr. *Charles Ford.*

14 April 1842.

1738. Supposing the bodies, interred a longer time than the others, give way, what is done?—The top ones will necessarily follow.

1739. *Chairman.*] How is your church warmed?—By two stoves, one a patent Nott's stove, and another.

1740. Have you ever smelled a particular smell, after the stoves have been fully warmed?—Not latterly, that relates to something a few years ago.

1741. What is that?—The stove was so fixed that I believe they drew the air to supply the stove from the vault; that has been done away with entirely.

1742. There was a smell at that time?—Yes; it could be perceived if a person stood close by the stove, and endeavoured to smell it.

1743. Do you consider leaden coffins a protection to persons entering the vault?—I conceive so, they are very close; no effluvia can arise from them if they are properly soldered; some of them are not sometimes.

1744. How do you account for the smell which you say arose at one time?—The whole of the coffins are not lead; it was from the others, and some of those that were lead are not soldered tight; when we find the outside wood fall off, we find the lead has not been soldered, consequently the effluvia can escape.

1745. Is that in consequence of the gas raising it?—No, they never have been soldered in that case.

Mr. *Joseph Harvey*, called in; and Examined.

Mr. *Joseph Harvey.*

1746. *Chairman.*] WHAT is your occupation?—A general builder.

1747. Are you parish clerk of St. Andrew Undershaft?—Yes.

1748. How long have you been in that situation?—Eighteen or nineteen years.

1749. What is the size of the churchyard?—A little above 20,000 superficial feet.

1750. Does the churchyard go all round the church?—No.

1751. Is it enclosed from the street?—Yes.

1752. Is it higher than the level of the pavement?—Yes.

1753. How much?—I should say something above two feet.

1754. What is the cause of that?—The number of bodies that have been buried there from time to time.

1755. What is the distance between the churchyard and the adjoining houses?—The greatest distance is about 23 feet.

1756. What is the nearest?—There is a warehouse close at the back of the church; that is about seven feet, I should think.

1757. How many burials, on an average, take place in the course of a year?—About a dozen is the average, I should say.

1758. Were there a great number during the cholera?—Yes.

1759. How many did you have?—Sometimes four in the course of a day; that is a very unusual thing with us; one day we buried four, and the next day four.

1760. What distance is the highest coffin from the surface of the earth?—Four feet; a little above four feet.

1761. You have none nearer the surface than four feet?—I have not seen any.

1762. Whenever a grave is dug, is there much obstruction found?—There has been a great deal.

1763. From what?—From bodies having been buried so thickly.

1764. What is the result; do they cut through?—Yes; I have seen them cut through.

1765. What do they do with the bodies or the coffins they cut through?—A great deal of wood has been consumed in the fire-places.

1766. What fire-places?—In the church, and the lead has been taken away and sold.

1767. For whose profit?—The parish; the money has been paid over to the churchwardens; in one instance they sold three tons, and that went to defray the expenses of clearing out all this old lead.

1768. What is done with the bones and bodies dug up?—I have seldom seen anything which could be called a body; nothing but bones; we have a bone-house, which is arched over.

1769. Mr. *Ainsworth.*] Is the churchyard completely full?—No; we can bury in it for ten or a dozen years to come, considering the population.

Mr. *Joseph Harvey.*

14 March 1842.

1770. Do you mean to say that in certain portions of the burial-ground the bodies have undergone such decomposition it is merely earth?—No, not merely earth, but bones; they would be put into the bone-house.

1771. You would find nothing but bones if you went down, the bodies have been so long interred?—I should say so; I never saw but in one instance anything to the contrary, that was part of a body, but very much decomposed.

1772. *Chairman.*] Is the receptacle for the bones sufficiently large to contain them?—It would not contain all which might be collected in ten or a dozen years.

1773. Do you bury close to the walls of the church?—Yes, as close as the foundation will let us go,

1774. Do the church windows look upon that part of the churchyard?—Yes, the sill of the window is up from the ground, it is under the windows.

1775. When any graves are opened, do you experience any bad smell?—Frequently.

1776. Is your residence in the vicinity of the churchyard?—It is alongside of it, occupying 60 feet in length.

1777. When a grave is opened, do you experience any bad smell in your house?—Yes, we have, in one of the rooms of our house.

1778. Are your neighbours affected by this smell?—No, they cannot be; they are not near enough.

1779. Mr. *Ainsworth.*] Do you consider that smell prejudicial to health?—We do not find it agreeable.

1780. Have you suffered from it at all?—No; it has been only from the opening of a grave, and when the body is interred, it is filled up again.

1781. *Chairman.*] Is there a free circulation of air there?—Not a very free circulation of air; there is an opening at the back, but it is very confined.

1782. Are there some flag-stones between the steps and the street?—Yes, that is from the churchyard.

1783. Have any bodies been deposited there?—Yes.

1784. What depth are they buried there?—We should not bury any there less than six feet.

1785. Did anything occur when a body was buried there?—Yes; there are some leaden coffins which had been buried, according to the latest date, 102 years before our removing them.

1786. They were removed?—Yes, they were.

1787. How many coffins were there?—Three.

1788. What was done with them?—The lead was laid in the bone-house for some time, and a hole dug for a receptacle of the bones; but the whole was completely crushed, the wood was entirely gone, and the lead lying together.

1789. Have you any vaults in the church?—Yes, there is one, the entrance to which is outside.

1790. Was not there an entrance formerly from the vestry-room into that vault?—Yes, but that was many years back.

1791. That is closed?—Yes.

1792. Is there any way of ventilating this vault?—Yes, there is an air-pipe to afford ventilation.

1793. Was there any reason why the alteration was made in the entrance from the vestry?—They found it offensive.

1794. You are a member of the vestry, of course?—Yes.

1795. Have you ever smelt in the vestry anything offensive.—Yes, but not from the bodies, but from raw hides being in a very bad state.

1796. How have you discovered that that smell arises from raw hides rather than putrid bodies?—That is very perceptible; they are in a warehouse close to the vestry window.

1797. Burials have taken place in the vault by the vestry since you have officiated, have they not?—No, it has been closed upwards of 20 years; but we did open it expressly once to bury one individual, Mr. Brunton.

1798. Was it full?—It is full, excepting room for one in a little recess.

1799. Has it come under your knowledge that in St. Mary-Axe there is in one of the cellars a place full of bones?—I have heard of such a thing, but I never witnessed it; but bones have been found in the cellars of houses near Leadenhall-street.

1800. How

1800. How do you account for that?—That it all formed a part of the churchyard formerly.

1801. Are those near to the parish school?—No; that is on the other side of the street, at the other end; if we have anything like excavation to make, we find many bodies.

1802. When the windows of the school-house have been open in hot weather, do you ever experience any offensive smell?—No, I do not think it is possible.

1803. Are the poor healthy in your immediate neighbourhood?—Yes; I never heard to the contrary. I have been in the habit of seeing them constantly, and I do not think them otherwise till they become very aged.

1804. Did they suffer much from the cholera?—Yes, very much in the neighbourhood of St. Mary-Axe; in the neighbourhood of which there were eight houses out of nine where five men lay dead one day, and one died about 12 hours afterwards, and two others, as I believe.

1805. You are an undertaker, are you not?—I am.

1806. Has it come under your observation in the course of your profession to attend burials in any of the churchyards in the city?—Yes.

1807. What is your opinion of them?—Some are far better than others; some are not as they ought to be.

1808. Have you found any difficulty from the state of any of the grave-yards?—Yes, in Aldgate particularly, from the crowded state of the churchyard.

1809. Is it your opinion that the churchyards in the city are nearly filled?—I should say generally that is the case.

1810. Mr. *Ainsworth.*] Is Aldgate churchyard, in your opinion, one of the worst?—Yes; that has always been considered one of the worst.

1811. *Chairman.*] Do you know anything of the churchyard of St. Katharine Cree, in Leadenhall-street?—Yes.

1812. What is its state; is it full?—It is not so full as Aldgate, but it is getting very full.

1813. Is the ground of that churchyard above the ground floor of the surrounding houses?—I do not recollect.

1814. Do you know St. Dionis' Back Church?—Yes.

1815. What is the state of that?—A very small confined narrow place indeed; that is getting very full.

1816. What is the state of St. Peter's, Cornhill?—That is getting full, but they can have a grave of any depth; that is in St. Peter's Alley.

1817. What is the state of St. Helen's, Bishopsgate?—That is in a better state; that is taken a great deal of care of.

1818. Is that nearly full?—I do not think that is so full as many others; there are very few funerals there.

1819. Have they raised the fees in that burial-ground?—I am not aware whether they have or not.

1820. What is the state of Allhallows Staining?—I do not know it.

1821. What is the state of St. Benedict's?—I do not know it; part of that parish is pulled down.

1822. What is the state of St. Olave's, Hart-street?—I have never buried there; my father has attended there.

1823. You have already spoken of St. Botolph, Aldgate?—Yes; I have had great difficulty in getting four feet for a grave there.

1824. Did any persons lose their lives there?—Yes; the grave was dug of a certain depth; it was never filled in, because it was preserved for the poor.

1825. The effluvia arising from that took away the lives of those men?—Yes.

1826. What is the state of St. Botolph, Bishopsgate?—It is getting rather full, but they have enlarged it latterly by pulling down the rectory-house.

1827. What is the state of St. Leonard, Shoreditch?—That is very bad; they have enlarged it, but there is a part where they cannot put any corpse without its floating; I have seen men working at a pump for four hours before they could put a corpse there.

1828. What is the state of Christchurch, Spitalfields?—I am not able to speak to that.

1829. In what part of the city is unhealthiness most prevalent?—In the neighbourhood of Spitalfields and Bethnal-green.

1830. Mr. *Ainsworth.*] How do you account for that?—They have very little room, and there is a very crowded population, and there is very bad drainage.

Mr. *Joseph Harvey.*

14 April 1842.

1831. *Chairman.*] From your general observations on the state of those churchyards with which you are acquainted in your profession as an undertaker, you are of opinion that they are in a very crowded state, and that from what occured in Aldgate they cannot be sometimes opened without danger to the parties engaged in the operation?—In many cases they cannot; and I was told to-day that they adopt the same plan now at Bishopsgate as they did at Aldgate, notwithstanding what happened there, digging a grave of a certain depth, and then only covering it over with a few boards and strewing a little earth over it and leaving it in that state; and if it is not exposed a little time, and the atmospheric air allowed to get in, it is impossible for a man to go down without risk of his life.

Lunæ, 18° *die Aprilis*, 1842.

MEMBERS PRESENT.

Colonel Acton.	Colonel Fox.
Mr. Ainsworth.	Sir R. H. Inglis.
Sir William Clay.	Mr. Kemble.
Mr. Cowper.	Lord Mahon.
Mr. Denison.	Mr. Vernon.

W. A. MACKINNON, Esq. IN THE CHAIR.

John Bowring, Esq. LL.D. a Member of The House; Examined.

John Bowring, Esq. LL.D.

18 April 1842.

1832. *Chairman.*] YOU are aware of the object of this Committee; the investigations which it has conducted are divided into three points; the first is to consider the necessity of removing the nuisance arising from interments in large towns or populous places; the next point of inquiry is, the remedies to be applied to correct that evil; and the third point, how those remedies may be applied so as not to interfere with vested rights. The Committee will be gratified to hear any information which you have to give upon any of these heads?—The subject upon which the Committee has been so worthily occupied, is one which is now exciting great attention throughout the whole of Europe; and I think all travellers must have been struck with the fact, that within the last 25 or 30 years, there is a very great augmentation of cemeteries in the neighbourhood of towns, and that the burying the dead within towns is daily less in practice. My observations have been excited by the evidence of that fact in many parts of Europe. In some countries by the influence of public opinion, and in others, by legislative measures, the same results have been produced; and I would state, as a general fact, that in the present generation the conviction of the inconveniences, and even the danger to public health from accumulating corpses within towns, has been leading to a very general and desirable result, namely, the creation of a great variety of burying places out of towns. In Spain, for example, when I was there as a youth, I recollect it was the almost universal practice to bury the dead within the cities; I believe the subject was taken up by the Cortes after the year 1812, and Acts were passed which compelled the burying the dead beyond the limits of towns. When I was last in Spain, I observed a great number of new burying places beyond the great seats of population; and the result had been, I think, generally satisfactory; satisfactory to the public health in two ways; first, from the removal of the dead bodies from the cities; and secondly, that cemeteries had become in Spain, as well as in other countries where they are now employed beyond the circles of the cities, places for public walks. It is well known that in the East the Mahomedans almost invariably bury their dead out of the towns, and that the Mahomedan cemeteries are the places where the inhabitants congregate for public health and public enjoyment. I have heard it stated, and I believe it is the fact, that the burial of the dead out of towns has had an excellent effect in the improvement of public taste. The funeral monuments which have been erected in many parts of Europe, and which are very superior in character to those which had existed before the present generation

generation, are evidence of this. The cemeteries in the neighbourhood of Paris are, many of them, agreeable and healthy walks; some of them adorned with very interesting architectural structures, and that is the case in many other capitals. I remember being struck with the variety and tastefulness of the erections in a large cemetery, in the neighbourhood of Copenhagen, at a short distance from the town. It contained a great number of very interesting monuments; it is a place of great public resort; and I cannot but think that the moral influence of a well-arranged burial place is important and valuable; that the habit of visiting the places of repose of the dead, as it is generally practised at even-tide, has a very beneficial effect on the moral and religious affections. I would, respectfully, suggest to the Committee, that it would be very desirable that, in their Report, they should gather together the different acts of legislation by which their object has been accomplished in other countries; for, of course, there have been, elsewhere as here, difficulties to be overcome, rights to be recognised, and interests to be respected; and, probably, the labours of the Committee would be very much facilitated if they obtained from those countries where those objects have been brought about by legislative interference, those acts or decrees by which the end has been obtained.

1833. You state, that in Spain the practice has been done away; what was the immediate cause; was it the effect on the health of the inhabitants?—I take for granted that the immediate cause was the success that had attended the experiment in the adjacent country, France; and, as a first step, one of the acts of the Cortes was to declare that burials within towns should be prohibited. The French legislation is exceedingly interesting, as exhibiting the progress of opinion, and the ultimate removal of all impediments. There are many reports and discussions emanating from both the legislative and executive authorities, which are full of instruction.

1834. You stated that, with regard to public taste, you thought the alteration would improve public taste, and that monuments of late had been improved; looking to the monuments in Westminster Abbey, are there any monuments of late years which surpass these which were formerly erected?—It is quite clear that the multitude cannot have costly monuments erected, but in an extensive burial-place there is a great theatre for public taste; the churchyard, in a town, is very much confined, from the value of land; the same money directed to the purchase of land in the neighbourhood of a town would realize a larger quantity, and the field of taste would be extended, and become accessible to the comparatively unopulent.

1835. Assuming that legislative enactments have been formed in France and in Spain, what would suggest itself to your mind as the best remedy to apply in this country, assuming that nuisance ought to be removed?—First recognise the rights possessed; recognising those rights, I think there should be a Parliamentary interference, that there should be an Act absolutely prohibiting burials in towns; for no other interference can accomplish the end. I cannot, however, but think that public opinion in this country would very soon come in aid of such an alteration, and that there would be little difficulty in giving effect to it.

1836. Do you think it would be possible to prevent putrid smell by requiring quick-lime to be introduced into coffins?—I doubt it. In Portugal, where, generally speaking, quick-lime is used for the purpose of destroying the corpses of the dead, I recollect some of the churchyards in the city were exceedingly offensive; nor do I see that the authorities would have sufficient means of interference to carry into effect the destruction of the offensive matter.

1837. You think that the only effectual mode of preventing evil effect is the removal of the bodies out of large towns?—Yes, at all events the most effectual.

1838. Lord *Mahon.*] Is quick-lime ever employed among the Eastern nations for the purpose of hastening decomposition?—Not that I am aware of.

1839. Sir *R. H. Inglis.*] From the attention you have paid to the subject in different countries, particularly in civilized Europe, can you state to the Committee any measure adopted by the executive government to relieve the poorer classes, whom they compel to bury their dead beyond the city, in respect of the extra expense of removal which such compulsion necessarily involves?—I am not aware that in any case the distance from the city is such as to add very considerably to the expense. The bearers who convey the corpse to the grave, having to proceed a somewhat greater distance, cannot add very considerably to the expense; the expense can only be from the demand for a little more time.

John Bowring, Esq. LL.D.

18 April 1842.

1840. Lord *Mahon.*] Is it not the case in the East, that the cemeteries begin where the town ends?—Very frequently: the new cemeteries at Alexandria are a considerable distance from the city; at Constantinople there are some which are quite adjacent, but there are others which are remote; I think many difficulties will be met by the circumstance, that the poor would almost invariably be deposited in the more adjacent burying-ground, while the more opulent would frequently be removed to a greater distance.

1841. *Chairman.*] Has the vicinity of the grave-yards to Constantinople arisen from the buildings approximated to them, or their being placed immediately at the end of the town?—It is not easy to trace the immediate cause; the limits of Constantinople have not been much changed for a long period.

1842. Mr. *Vernon.*] The burying-place at Pompeii was immediately without the walls?—Yes; that was the general habit of the ancients.

1843. Lord *Mahon.*] Are you aware of any measures taken in the European countries with which you are acquainted for giving compensation to the clergy in respect of the burials in the old churchyards?—No, I am not.

1844. What measures would you recommend in this country for that object?—I am of opinion that the better way would be to buy out existing interests; that that is the simplest way to get rid of a permanent difficulty; and it is very important to remove all grounds of future discussion, that there should be no contest in a matter so interesting and so solemn as the interment of the dead, which might involve a clergyman in a misunderstanding with his parishioners.

1845. You would propose to give compensation to the existing incumbents?—I should concur in that very cheerfully, to get rid of so enormous an evil. It occurred to me some time ago in Glasgow, to see corpses absolutely visible on the surface of the churchyard.

1846. Suppose a case extending beyond the life of the present incumbent, where the income of a future incumbent might depend on the burial of the dead?—The best regulation would appear to be that which would estimate the value, and purchase it out and out. I should make a sacrifice willingly to get rid of so great an evil.

1847. *Chairman.*] From your observation, having travelled a great deal, you consider interments out of large towns as general in all civilized places?—I think that is the progress of things, and that such progress has been vastly accelerated within the last 30 years; that one nation has influenced another, and that in this country, even without legislation, that tendency is generally obvious; there are new cemeteries for the dead in the neighbourhood of many large towns.

1848. Mr. *Denison.*] Are you acquainted with the arrangements and details sufficiently to inform the Committee in what country these matters are best conducted, so as to guide the deliberations of the Committee?—No, not in sufficient detail; and for that reason I recommended that the acts and decrees under which those changes had been effected in other countries, should be laid before the Committee. I have no doubt that they would give much valuable information. With regard to the result on the arts, no one can have seen the Italian churchyards, even those connected with the English churches in Italy, without being struck with the beauty and variety of the monuments.

1849. Sir *R. H. Inglis.*] From an expression you used in the earlier part of your examination, in which you referred to parties congregating for the sake of public health and public enjoyment in the cemeteries in the environs of some cities, are the Committee to understand that you do not consider those cemeteries a cause or receptacle of malaria or ill-health?—The great advantage of burial places beyond towns is the free circulation of air in those places; but burial places in towns have a tendency to cause disease, from their confinement and crowded state: inasmuch as there is not any necessary accumulation of bodies in the burial places out of towns, and every arrangement may be made for interring them at a certain depth and at a certain distance, I am not aware that any evil has arisen from burying in public cemeteries out of towns, or taking recreation in them.

1850. Colonel *Acton.*] Has the Campo Santo burying-ground at Naples been observed particularly by you?—It has not. As to the arrangement for individuals in extreme poverty, I have frequently observed in Catholic countries there is a receptacle where bodies are deposited, and have seen bodies deposited and left for interment, and buried with the one solitary religious ceremony. That is not an unusual state of things in the south of Europe.

John Bowring, Esq. LL.D.

18 April 1842.

1851. Mr. *Vernon.*] Are you aware that there exist in those countries fraternities which undertake the charge of the dead of their respective bodies?—Yes.

1852. And that the whole are buried, as an act of charity, by the fraternity?—Yes; and with those burial fraternities sometimes people of very high rank are connected.

1853. Sir *R. H. Inglis.*] Have you heard that the Grand Duke of Tuscany attends that confraternity of the dead?—Yes, princes of royal houses not unfrequently do so; it is well known that they wear garments which prevent their features being discovered, and there is not any distinction between the meanest and the mightiest. That assistance given to burying the dead by fraternities is a very interesting fact.

1854. Lord *Mahon.*] The system also prevails in Spain?—Yes.

1855. Mr. *Vernon.*] Are you aware of the existence in Switzerland of sumptuary laws which regulate the time and all the arrangements with respect to the burial of all classes indiscriminately?—I believe that is the case in some of the cantons, but in Switzerland there is no general regulation, every canton having its separate laws. No man can have been in Switzerland without being very much interested with the character of the cemeteries. One feature connected with the removal of burial places from towns, is, that beautiful and interesting places may be chosen, and in Syria, for example, the site of some of the ancient sepulchres is exceedingly striking. I remember, when in Palestine, taking a meal on the borders of the lake of Galilee, and, looking behind me, observed the ancient sepulchres of the town of Magdala, which is still known by the name of Migdal, in an exceedingly romantic situation, hewn out of a rock which towered above the lake.

1856. *Chairman.*] Does not the dryness of the climate in Palestine and Egypt enable you, with impunity, to be in the grave-yards when you could not in this country?—Palestine is not a dry country, it is frequently a very humid one; so much rain is there in Syria for many months, that travelling is almost impossible without the greatest inconvenience. Not so in Egypt, where, in many parts, rain does not fall from year to year.

1857. Still, though rain may fall, there is a great distinction between rain falling and a damp season; do you not think that it is much safer to health to resort to the grave-yards in those countries than in this?—I think the climate of Syria cannot be considered a healthy one; the whole of the coast is certainly very unhealthy.

1858. There is one difficulty which has been obviated abroad, which would exist in this country, that in many places religious feeling enables the poor to be buried at the expense of certain societies, or persons who combine together for that purpose; as that feeling or peculiar sentiment does not exist in England, you must be aware there would be more difficulty in making an arrangement here than there?—If the additional expense of removing the body out of the town were considerable, I conceive the difficulty would be great; but as the additional expense would be small, I do not think that the difficulty would be at all serious.

Colonel *Patrick Campbell*, called in; and Examined.

Colonel *Patrick Campbell*

1859. *Chairman.*] WHAT situation have you held abroad?—In Egypt I was Her Majesty's agent and consul-general from the beginning of the year 1833 to the end of December 1839, and at the same time agent for the East India Company.

1860. You are aware of the object of this Committee; will you have the kindness to state generally to them what has come under your observation with reference to the interments in those countries you have been in?—Dr. Bowring having mentioned Spain, recals to my recollection that between the years 1817 and 1820 I was an officer in the Spanish service, serving with leave from the Duke of Wellington. I was aide-de-camp to General Castanos, who was then captain-general of Catalonia; and in Barcelona one of the churchyards was exceedingly offensive from the accumulation of dead: and there was a general order given by General Castanos, (whether he did it connexion with any of the clerical bodies or the government of Madrid I do not know,) but the burial-place was then removed to a place called Gracie, about three miles out of Barcelona, and from that time no more dead were interred within the walls.

1861. Did you find that benefit the health of the town?—I do not know; I had not an opportunity of knowing exactly the fact of the utility, but I know that the

Colonel *Patrick Campbell.*

18 April 1842.

churchyard which first gave rise to the removing of the cemetery out of the town was exceedingly offensive; therefore I have no doubt it must have materially affected the health of the town.

1862. Sir *R. H. Inglis.*] Do you happen to know by what means the expense was defrayed of removing the bodies of the poor to a distance of three miles from the town?—I do not know; but in Spain there are co-fraternities, and some of the rich monasteries have contributed to that object; in what proportion or how exactly, I am not aware.

1863. Lord *Mahon.*] It has been stated by Dr. Bowring in evidence, that according to a decree of the Cortes in 1812, burying in large towns in Spain was absolutely prohibited; how came it then that so late as the year 1818 the burying in the city of Barcelona still continued?—I do not know whether that order was merely optional, or whether it was compulsory, as to burying out of towns; but I know that until that period no persons were buried out of Barcelona, and that they buried in the different churchyards until the formation of that cemetery at Gracie.

1864. Practically there was no attention paid to that order, if it had been made?—Practically there was not.

1865. *Chairman.*] Has your observation extended to other places as well?—I was resident at Alexandria at the time the different burial places were removed out of the town. For each religion there was a separate burial place; a Protestant burying place, a Roman-catholic burying place, a Greek church burying place, a Jewish burying place, a Mohammedan burying place, and an Armenian burying place; in fact, every sect in the country had a burying place within the walls of Alexandria; and indeed the Turks had several burial places, which were easily known by the marble pillars; they generally put up a different kind of turban, according to the profession of the person buried. And in the year 1835, after the severe plague, or towards the early part of 1836, I was talking to Mahomet Ali one day about it; he asked, whether any means could be adopted to remove the burial places; whether I thought it would be advantageous. At that time the Roman-catholic burying ground was completely burthened with dead inside the walls of the town, exceedingly offensive. I told the Pacha I thought there was plenty of space out of the town, one or two miles from the town, and that it would be easily arranged with the consent of the heads of the different religions, to remove the burying places, or prevent further burials going on in Alexandria; and immediately he sent the chief of police to me. I was at that time president of what was called the Board of Ornament, which Mahomet Ali begged me to take charge of, for the improvement of the streets. Some of the streets were very narrow, very many buildings irregularly placed. I was perpetual president. Mr. Thurburn, who was British consul at Alexandria; Mr. Harris, the principal British merchant; and the Greek consul-general, and another consul-general; the Turkish head of police; the Turkish president of the Tribunal of Commerce, and the Turkish military engineer. There was the chief civil engineer, an Italian; and we took everything of that kind into our own hands. The Pacha sent the chief of police to me; I told him to take the civil engineer, who was paid by the Pacha for attending on the board, and go to the chiefs of the different religions, and arrange with them about having their burials out of the town. The Turkish burying ground was taken to Pompey's Pillar, and the others were towards the Rosetta Gate, about a mile off the road, and a mile and a half or two miles out of the town: each company fixed on their own burying ground, and the ground was given up to them, and since that no bodies have been interred within the walls of Alexandria; and many of the numerous Turkish burying places have been lately built on, so that the town has been very much improved.

1866. How could they build on the old burying places, without turning up the bones, and having the chance of effluvia?—Many of those burying places had been so long without having been used, that they were only remains; it was known by the monuments that they were burying places, but perhaps they had not been used for 40 or 50 years.

1867. Mr. *Denison.*] Can you state the plan they adopted for the burial of the dead in those new cemeteries?—In the Protestant burying places they buried as we do in England; the Greeks buried in a sort of vault, which was but very partially closed, and the smell was very offensive: the head of the Turkish police came to report to me, one day, a very offensive smell arising from the Greek cemetery; I immediately sent him to the head of the Greek convent, with a request

Colonel *Patrick Campbell.*

18 April 1842.

request that means might be adopted to prevent that, and that they would bury them under ground, in the usual manner: it was immediately complied with, and the bodies then beginning to be offensive in the new Greek cemetery out of town, were removed, and buried in the usual manner; and up to the period of my departure that system had been adopted in that ground as well as the other.

1868. By those measures you improved very much the appearance of the town?—Yes, and the health of it; for after that series of years, in 1835, the smell from some of the burying grounds was exceedingly offensive.

1869. Are you of opinion with Sir Joseph de Courcy Laffan that the plague has in some instances arisen from the putrefaction of bodies in towns?—No, I do not think it has, for the plague has originated in many places where that could not have given rise to it. I have had conversation with him upon the subject, but I do not agree with him in that view; my opinion is, that the plague is contagious.

1870. With regard to any system of preventing the nuisance in this country, is there any remedy you have to suggest?—Nothing whatever; it is a subject I have never considered; those are merely facts falling within my knowledge, in my official situation.

The Reverend *Frank Hewson*, called in; and Examined.

Rev. *Frank Hewson.*

1871. *Chairman.*] YOU are aware of the objects of investigation of this Committee; will you have the kindness to state whatever occurs to you upon the subject?—It occurred to me, having been engaged as the curate of a very populous parish in Birmingham for some years past, that I might give some information. At the parish of St. Mary's, in Birmingham, which is situated in the very heart of the town, in the centre of a square, there is a large burying-place, and, in consequence of the lowness of the fees, it is used very much by the poor. The consequence of this is, that the average number of burials in the course of a year is about 1,200. I have myself buried between 1,100 and 1,200 in the course of a year there. On Sundays there are from 20 to 30 buried; all those corpses are brought within the church between the services, and I can safely say that the smell and effluvia is most abominable and disgusting, and very much calculated to keep away a great many persons from the afternoon service, which immediately followed the burials.

1872. Mr. *Ainsworth.*] At what time were the bodies brought in?—They were brought on Sunday, I should think, at two o'clock; on week days they were brought at four. There were three services in the church, morning service, afternoon, and evening service; the bodies were interred just before the afternoon service, and the smell remained in the church during the time of service; perhaps two or three hours; there was a continued succession, in fact, of corpses, till three o'clock.

1873. *Chairman.*] Could not you alter that regulation?—It was quite impossible; there were three services in the church; they must have taken place at some time or other, and this was the most convenient part of the day to have them.

1874. Did the interments take place in the churchyard which surrounds the church?—Yes; the churchyard is so very full that in digging for a fresh grave they frequently turn up bones and pieces of human flesh; and I am convinced that the health of the square in which this stands, which is a very important square in Birmingham, cannot be improved by that.

1875. What is the square?—St. Mary's-square.

1876. Colonel *Fox.*] You say there were pieces of human flesh; would not the coffin protect them?—They were sometimes obliged to go very deep, and to try every possible means of finding room for fresh coffins.

1877. Lord *Mahon.*] Have you any reason to believe that at Birmingham coffins were taken away by night?—I never heard that they were.

1878. Mr. *Vernon.*] They do not usually in that class of society employ lead?—No; I do not suppose there was a single leaden coffin in the whole churchyard.

1879. Colonel *Fox.*] Have you ever had any complaint against the grave-diggers of improper conduct?—I have heard persons constantly complain of their friends' coffins being disturbed, coming and crying and lamenting to me and other clergymen, that the bodies of their children and their friends were constantly knocked about by seeking for fresh ground; but, as far as my information goes, this extends to all other large towns, and not only to other large towns, but to many

Rev. *Frank Hewson.*

18 April 1842.

country parishes. I am now incumbent at the parish of Norwood, in Middlesex, and I may say we have scarcely found room to bury a fresh corpse; there is room at the north side, but there is a great prejudice with many persons against being buried on the north side.

1880. Mr. *Ainsworth.*] Are the interment fees less at the north side than the south?—I am not aware of that fact: at Birmingham they bury all round the church.

1881. Mr. *Denison.*] Did they bury much in the vaults?—I do not believe there are many vaults.

1882. Lord *Mahon.*] What was the wish of the inhabitants, did they wish for a cemetery?—I should say they were compelled to bury there; and the inducement to bury there was, that the fees were lower than in the other churchyards; but I believe that the people were very much injured by it.

1883. *Chairman.*] What is the size of the churchyard at Birmingham?—I should say it was an acre.

1884. You buried 1,200 a year there?—Yes.

1885. How long had it been open?—Many years.

1886. Should you say 50 years?—Yes.

1887. Mr. *Denison.*] Has the ground been much raised?—Yes; very much.

1888. *Chairman.*] Do you believe that 60,000 have been buried in that ground?—I cannot speak to the number, but I am sure it is very large.

1889. Who is the rector of St. Mary's?—The clergyman is Mr. Barrett; the former clergyman, for whom I believe it was built, was Mr. Burne.

1890. Who receives the fees?—The incumbent; it is a chapel rather than a church; Mr. Barrett lives in the square in which the church stands.

1891. Mr. *Kemble.*] Do you say that bringing the corpses into the church kept away many of the congregation?—I think it kept away many persons in the afternoon, because the smell was worse in the afternoon while the coffins were there, or immediately after the coffins were removed, than at other times.

1892. Have you found your own health affected?—I cannot say that I have; but if I had had my choice I should not have gone to that church myself.

1893. Did you feel any personal inconvenience yourself from that nuisance?—I am uncertain; I am not very delicate; I felt it very disagreeable; but whether it had an effect upon my health, I cannot say.

1894. You are not conscious of it?—No.

1895. Mr. *Vernon.*] Do you know of any feeling among the lower orders as to the long preservation of the remains of their departed friends?—They are very anxious for the bodies of their friends to be preserved.

1896. Therefore they would object to any means to hasten decomposition?—Nothing would annoy them more than destroying the body, or throwing in quicklime; it would be a very unenglish mode. At a church near Bolton, in Lancashire, with which I was connected, where they bury 400 in a year, the parish of Dean, parties like to bury their dead relatives, because they call it a dry lying ground; but some say that the drier it is, the more rapidly it decomposes.

1897. *Chairman.*] You are decidedly of opinion that it is injurious to the health of the inhabitants of large towns that burials should take place within them?—I have no doubt in my own mind that it is, though I cannot speak to any facts. I object to churches being used at all for burial purposes; I believe it was never intended. I would have them removed, especially where there are grounds that are crowded.

1898. You state, that in the village in which you now reside there is inconvenience from the churchyard being in the neighbourhood of the village?—It is so crowded, and I presume there would be a difficulty in getting fresh ground in the neighbourhood; it is only nine miles from London. The Asylum at Hanwell stands in the parish, and the dead used to be taken and buried in that ground until the ground became too full; but there is now a burial-ground provided for the Asylum, and that without any attention to the vested rights of the incumbent; he did not interfere to prevent it.

1899. As a clergyman, what do you suppose would be the additional expense to a populous parish of obtaining a burial-ground out of its precincts, and conveying the bodies of the poor?—I should say, to a populous parish it would be very trifling, if it was so much a family; two or three acres of ground to each parish, or a less quantity, could not be a very expensive thing. I do not see why

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Rev. *Frank Hewson.*

18 April 1842.

many of our commons, which are being enclosed in various parishes, might not be appropriated to burial-grounds, and ornamented.

1900. What would you say would make a sufficient compensation to the incumbent for the loss of the fees in your parish, and would enable the parishioners to provide other places?—I do not see how you can compensate the incumbent; for if you compensate the present incumbent, it must be carried on to every succeeding incumbent, or the value of the living will be lowered; but at Liverpool they have got a cemetery in which members of the Church of England are sometimes buried, and then the services of the clergymen of the Church of England are used. I should say, it would be very possible to have a cemetery on the verge of every large town, and a chaplain appointed in connexion with the Church of England where all persons dying belonging to that church might be buried; and this chaplain might give an account of the fees he received to the different incumbents from whose parishes the corpses came, and he might receive a certain salary, paid by them all. Nothing is more distressing to clergymen in large towns than the number of funerals they have to attend, it confines them so closely to the church.

1901. Sir *R. H. Inglis.*] In the case to which you have referred the funerals were almost entirely on the Sunday?—There were three or four every day, and about 20 on the Sunday.

1902. You state that you buried between 1,100 and 1,200 in the course of the year. At a subsequent period of your examination the Committee understood that the aggregate number buried in that churchyard in the course of the year was 1200, and taking the lowest estimate of those buried by yourself, they must have amounted to 1040?—I was absent some weeks during the year. I have said that I buried about 1100; the whole number buried was 1200.

1903. Mr. *Vernon.*] You buried indiscriminately members of the Church of England and Dissenters?—I never made inquiries; they were brought to the church.

1904. There was no such distinction ever made in that parish?—I suppose not.

1905. Sir *R. H. Inglis.*] What was the population of that parish?—I cannot say that I am quite aware whether it had a district attached to it; it was not a parish church.

1906. *Chairman.*] You have found that a nuisance may exist both in the large and populous town of Birmingham and in your rural parish?—Yes, I think it is generally felt as a nuisance to have over-crowded burying-grounds in country places; it is very annoying to have bodies disturbed by digging fresh graves. The Jews buried, as the Committee are aware, without the cities; and it was supposed the Temple was profaned by any approach of a dead body. Why Christian churches should be considered proper places for burials I cannot tell.

Mr. *Robert Baldock*, called in; and Examined.

Mr. *Robert Baldock.*

1907. *Chairman.*] WHAT situation in life do you fill?—I am a bookseller in Holborn; I am churchwarden of the parish of St. Andrew, Holborn. We have felt uneasy at hearing that evidence had been given here of circumstances which it was discreditable to us, as officers, to permit to take place in our burying-place in Shoe-lane. I have to request that evidence may be given to show the fact, that there is not the nuisance which we have heard has been complained of. I have been in office two years; I can state, as far as recollection goes; I do not, of course, register every grave, having only to do with the fees arising out of the ground. I am quite certain there have not been more than half a dozen bodies buried next to the wall adjoining Shoe-lane; there are certain apertures made in that wall for the purpose of draining the water; we had formerly a very good wholesome spring running out of that ground; that spring was stopped up in consequence of its being made a receptacle by fish-people, and to clear the water away it was necessary to insert holes in the wall; therefore if anything has been seen we are quite sure it must have been simply water arising out of the ground. London lies on a bed of clay; this parish of St. Andrew, Holborn, is situated in this way; we dug six wells, passing through a loamy clay of about four or five feet; that is the arrangement of the soil in the street of Holborn at Middle-row, where there is a pump, in Brooks-market, in Queen-square, and the end of Bedford-row. I mention this to show that this drainage was necessary. We found about five feet of what is usually termed loamy clay, brick clay; then we came to rough gravel and drift sand, and at about 20 feet we came to the large blue clay,

Mr. *Robert Baldock.*

18 April 1842.

which runs all under London. Our wells were 25 feet deep. It appears that the gravel crops out at the wall. We dug a well opposite the almshouses in Gray's-inn-lane; there we found no water; but in this ground at St. Andrew's, Holborn, it seems there is gravel running through the ground to admit the percolation of the water from the higher parts of the parish; therefore we were obliged to insert those apertures to let off the water from the gravel of the hill. I state that to account for the apertures, and that nothing but water, or water partly coloured by the soil, can have come from those apertures. I witnessed a fortnight ago a grave dug at 16 feet; we then came into a mixture of clay and gravel, which would admit of the free percolation of the water; there was perhaps lower down a loose bed of gravel. But one of the reasons we have not buried along those walls is, that in 1839 we consecrated about half an acre of new ground, which had never had any interments; the bodies of the poor have been buried in that new ground.

1908. Mr. *Ainsworth.*] Does the new ground adjoin the old ground?—It joins the old ground, and is below the ground on the south; it is behind the church; it was by arrangement with the Farringdon-market committee we got that additional ground. One of the reasons why we do not bury in this ground which has been the subject of evidence here, is, that it is subject to a very high charge, and none but persons of opulence can afford to be buried there.

1909. You stated that you had enlarged the burying-ground in St. Andrew's, Holborn, a few years back; from whence did the funds arise which enabled you to do that?—I think some arrangement occurred with the proprietors of Farringdon-market on exchange of ground, and that there was a small portion of ground which was free for interment; I believe the cost of that came out of an estate belonging to the parish; we did not purchase it; we have a very large ground.

1910. Sir *William Clay.*] Do the Committee rightly understand you to say, that you believe the water which comes through the holes of the churchyard wall, in Shoe-lane, which has been alluded to, proceeds from a spring which formerly supplied the well which has been stopped up?—I have been given to understand that those holes were made after that spring was stopped; but the holes were made more particularly to clear the ground of water, the fact of this spring being stopped would necessarily throw the water back on the ground; therefore, there must be some means of drainage adopted to clear it off.

1911. You say that the churchyard bounded by the wall has not been used for burials recently?—It is used; but the portion now in question has been very sparingly used; it is an expensive ground. I am told by the sexton, in four years he has put only two bodies near the wall; it is supposed there was an issuing of offensive matter, but it was impossible that anything offensive should have come out of those apertures in consequence of burials which had taken place there.

1912. How long is it since the practice of burying in that ground has been continued only to the limited extent you now mention?—In 1839 we obtained this new ground, and that took away all the common burials; but we have a ground, consisting of somewhere about three acres, in Gray's-inn-road, near Cubitt's, and many of the better funerals go there.

1913. Can you state what was the number of burials in the churchyard of St. Andrew's, Holborn, previous to 1839?—I do not think I can.

1914. What is the size of the churchyard?—I think the yard consisted of about an acre of ground, and the new portion about half an acre; but the ground in Gray's-inn-road is about three acres.

1915. Does the acre and a half include the site of the church?—No; independently of the site of the church, the yard appropriated to burials is about an acre and a half.

1916. Have you any suggestion to make to the Committee as to the relief of the expense to poor persons?—We have thought for some time, taking an interest in this matter, that in forming the Poor Law Bill there was an omission in not making provision that pauper funerals should be carried out of the town. I think the amount of pauper funerals in our ground in Gray's-inn-lane is about 100. We bury 100 annually of the poor, free; but the poor are very reluctant to go to the parishes to bury. It is the practice in our parish, that all persons claiming to be paupers can be buried without any cost; they can claim a shell of the parish authorities, and that carries with it all fees, both for ground and clergyman's fees, and all other officers, but they very seldom claim that; it is only in cases of extreme poverty they claim it, but the parties who die in the union houses are buried

buried in that way; and I have no hesitation in saying it is one of the most objectionable things I know existing in London. To save our ground, we are obliged to dig very large pits; I believe they contain about 70 or 80 bodies in the course of a year; they are filled up; this is done with as much care as can be; no coffin is put in without six inches over it, and I do not believe there is any very immediate danger; but I should say that 80 bodies should not be put together in one place in one year, and I should hope provision would be made to bury a large number of poor out of the parishes, and that the rich in this case, as in others, should bear the cost; and that if cemeteries are formed, they should be called upon at a very low rate to take those bodies. We have built churches at the cost of those who pay for the pews, and I cannot conceive why something of that sort should not be done for the benefit of the poor; the poor have represented to the churchwardens that they are very unwilling to have their friends buried as paupers, and the objection is, that they cannot follow them, and we have felt a respect for their feelings. I should hope that provision would be made to enable the poor to bury their friends without great cost.

1917. Mr. *Denison.*] You say the poor do not like to accept gratuitous burial; what is the expense to a poor man in that parish now?—I think the entire fees are 12 *s.*; the churchwarden claims for the ground only 18 *d.*

1918. Can you tell what the rest of the expense to a poor man would probably be?—About 3 *l.*

1919. Lord *Mahon.*] Has there been any change in the amount of those fees of late years?—I think there has not in pauper fees; I think there is in the higher fee.

1920. Mr. *Denison.*] Do you think the poor would object to their friends being buried in cemeteries out of town, at a reasonable cost?—No, I think not. With respect to the churchwardens' fees, they clear their present expenses during the year of office by those fees, so that the question of church rates would, perhaps, be mixed up with this. The churchwardens could not do certain things which they do, unless some means were put into their power of levying a small rate to pay for those necessary charges.

1921. As you have half an acre of new land, you do not find any immediate inconvenience as to burials; but before this ground was obtained was not great inconvenience experienced, and a great nuisance in the churchyard?—I think there was a difficulty in getting graves.

1922. Mr. *Vernon.*] Had you a rate for purchasing that new land?—No; we had some other property in the parish, and took that in exchange.

1923. Can you state in detail how the 12 *s.* is divided?—I think the fee to the clergyman is 5 *s.* 6 *d.*, to the sexton 2 *s.*, the clerk 18 *d.*, the grave-digger 18 *d.*

1924. Does the fee of the grave-digger depend upon the depth?—Yes; but it is about 18 *d.*

1925. Colonel *Fox.*] Do you think there would be any prejudice on the part of the population in your neighbourhood if by law a certain quantity of quick-lime was put into every coffin to destroy the body in a less time?—I think every party would object to it; it would outrage the feelings of the poor.

1926. Mr. *Kemble.*] You say the paupers object to their friends being buried by the parish, because they are not allowed to attend the funeral?—I think they are allowed to attend; but in the case of a pauper funeral they put several together, and they must attend at the time appointed, which will frequently be inconvenient to their friends; they do not like to attend funerals *en masse*, which is like attending the funerals of other persons.

1927. They are not prevented attending?—No; the ground with which I have to do is in the country; my colleague has to do with the churchyard in the city of London; they attend if they wish it, but they are not allowed hoods and scarfs.

1928. The reason why the scarfs and hoods are not allowed to be worn by the paupers is presumed to be, that the parties who could afford hoods and scarfs could also afford to pay the fees in respect of the funerals of their relatives?—I believe it is.

1929. There is, therefore, no actual prohibition to any party paying any mark of respect to the remains of his deceased friend if he does it at his own expense?—Precisely so; that is the case in the country.

1930. Colonel *Fox.*] Is that the case in other parishes?—I cannot say.

Sir *James Fellowes*, called in; and Examined.

Sir *James Fellowes*.

18 April 1842.

1931. *Chairman.*] WILL you have the goodness to state the Committee the situation you held abroad?—I was physician to the army. I was sent out to Gibraltar at the time of the pestilential fever there in 1804, and I was afterwards employed as Inspector-general of the military hospitals during the whole siege of Cadiz, the whole four years.

1932. Have the kindness to state what are your impressions with regard to the common practice in this country of interring in large towns?—I can only judge from what I saw abroad in those Catholic countries in consequence of the pestilential fever. I saw while there, and I had an opportunity of seeing several; it was the practice formerly to bury all their dead in the churches, in what we should call vaults; the bodies were always mixed with lime that decomposition might take place immediately; but in consequence of that pestilential fever which destroyed so many thousand people, the Government came to the determination to bury all the people who died, out of the towns: there were large places appropriated to the dead, and there was no person whatever allowed to be buried in the churches or in the towns; and that practice now prevails and has continued ever since. They were the most bigotted people, they always wished to have the people buried in their churches; but in consequence of these fevers which were so destructive, they adopted that system which prevails, and which I believe to be the best. I should say that the practice of burying in towns is extremely prejudicial and must be productive of great mischief, and it is highly probable it is productive very often of disease.

1933. Colonel *Fox.*] Do you consider that there has been less pestilence since that in the south of Europe?—I should say there has been less pestilence since that period; I was there in 1805. I went afterwards to Seville and Malaga, where nearly 100,000 persons had been carried off; and in 1812 we had it at Cadiz; the same practice was adopted; they were not allowed to bury in the churches.

1934. *Chairman.*] Do you think it is more necessary to prevent interment in towns in this country from the damp climate, than in climates such as those of Spain and Portugal?—I think it is equally objectionable. I cannot see why bodies should be suffered in this country to be buried in towns or in churches; and I am quite satisfied every physician would give the same opinion, that it is extremely prejudicial to health.

1935. When the alteration to which you allude was made, to prevent the pestilential fevers in Spain, how was the expense supplied?—It was supplied by the Government. The first fevers which took place in Spain were in 1800; they begun at Seville, and then at Malaga. I went after they had occurred to Gibraltar, in 1804; we were then at war with Spain, but I had a passport from General Castanos to go where I pleased. The authorities gave me all the facilities for seeing everything. It was at that time they came to the determination; this was before the election of the Cortes, and after the Cortes were established they confirmed this. A tax was levied, and I know there was a general understanding throughout the country.

1936. The Cortes was elected in 1810, was it not?—I believe it was. I was there at the first installation of the Cortes.

1937. Sir *William Clay.*] You are clearly of opinion that even in this climate the effluvia arising from the decomposition of dead bodies might become a generating cause of pestilence?—That is my opinion, and has always been so. When I returned from Spain I saw some account of the fever in Andalusia, and I mentioned my opinion of the extreme danger of burying in towns, and that it was high time that we should give up that system in our own country.

1938. Sir *R. H. Inglis.*] Have you ever been able to ascertain professionally the origin of any disease, either in the case of an individual or in masses, as connected with the neighbourhood of places of interment?—No, I am not prepared with any cases; but I should say, as a general principle, it is extremely prejudicial to health.

1939. You are not able to state any specific instance in which disease has been generated?—No, I am not prepared to state any particular case.

1940. *Chairman.*] It is your conviction generally that the decomposition of corpses is capable of generating disease in the human frame, which disease may in its turn become an epidemic?—Yes, it might be so, from the extrication of gases; that was the opinion in Spain.

Sir *James Fellowes.*

18 April 1842.

1941. Do you coincide in opinion with Sir Joseph De Courcy Laffan, who states that in his opinion the plague has originated from that cause?—How the plague or any of those pestilential fevers originate it is difficult to say; but from reading on this point, one would say that the accumulation of bodies in that state would be extremely prejudicial, and one would avoid as much as possible placing persons near them.

1942. Have you any circumstance which enable you to say that any one of those fevers has arisen from the immediate contact of the living subject with the effluvia arising from the dead?—No, I am not prepared with any case.

1943. *Chairman.*] As a magistrate of Hampshire, and having resided in the county, has any remedy occurred to you for this evil?—I have lived 25 years in Hampshire; but that I do not think is applicable in the same way, because there there is a large open space, and there are not many buried in a country churchyard, and very few in the churches.

1944. You do not think the evil exists so much in the country as in populous towns?—No.

1945. Have you ever given your attention to the means by which, if interments were directed to take place out of towns, that could be effected in the easiest manner with regard to the clergy, and so on?—I cannot give an opinion upon those points.

Mr. *Daniel Richard Harker*, called in; and Examined.

Mr. *D. R. Harker.*

1946. *Chairman.*] IN what situation are you?—I am parish clerk of St. Stephen's, Coleman-street, in the City of London.

1947. What have you to state to the Committee upon this subject?—As to our accommodation for burials, and the manner in which the vaults have been cleared. We have three burial places: we have a churchyard, which is on the north side of the church; it is surrounded by houses; there are two taverns on one side of it, and houses at each end: we have a vault, called the common vault, where the lower classes are buried; and another that is called the best vault, which is under the belfry: we have also certain vaults called the chancel vaults, in the church; and one called the vicar's vault. We have buried in the common vault a great many bodies since I have been there, and I have been astonished at the circumstance of there not being any effluvia when we go into the vault. I have been down at all times, and have never discovered any unpleasantness more than an earthy smell; it is a large vault.

1948. Mr. *Ainsworth.*] Is it ventilated?—Yes, there are holes in the stones: it is where the parishioners have to come up to the church. The house on that side belongs to a cloth-factor; I believe they are in the habit of working over those vaults in brushing cloth with the windows open.

1949. Sir *William Clay.*] Where are the holes you speak of?—In the stones: they are arched vaults.

1950. They are not in the body of the church?—No, in the open air. Some of the parties at those taverns are in the habit of sitting there with the windows open all the day in fine weather; and there is one of the inhabitants who has a meat-safe put out near the ground floor, and I think they would hardly put that there if they felt any inconvenience.

1951. What is the number of burials that takes place in your parish annually?—Between 40 and 50.

1952. Mr. *Ainsworth.*] What is the size of your vaults?—From 30 to 40 yards long; they go the whole length of the church, and so does the churchyard.

1953. Mr. *Kemble.*] Your churchyard is only on one side, the north side?—Yes.

1954. Colonel *Fox.*] In what way do the parish clerks derive their incomes, and how are they appointed?—They are appointed some by the rector or vicar of the parish, others by the parishioners; they are licensed and are elected for life. They derive their emoluments from the fees on marriages, baptisms, and burials; some have small salaries, others no salary, but are paid entirely by fees. Since the Register Act came into force, that has made a great difference: they used to have from 3,000 to 4,000 baptisms a year; they have now little more than 1,000, in consequence of there being nothing to pay; they have nothing to depend upon but the burials; parties go to district chapels to be married; and if they have nothing but the burials to depend on, or a compensation, their bread is entirely taken away.

Mr. *D. R. Harker.*

18 April 1842.

Many of them have been in business, and in consequence of being elected parish clerks have given up their business; others have paid for their situations.

1955. Mr. *Kemble.*] What fees do they derive out of the burials in your parish?—In the common vault the fee is 1 *s.* 8 *d.*; in the best vault it is 6 *s.*: by the Bill of Mortality it appears that the number buried in our parish is four.

1956. What proportion do the best bear to the common ones?—I have seen few in the churchyard that would be called best funerals, only that some persons prefer the ground to the vaults.

1957. What is the average profit in your parish?—I should think the more common funerals are rather more than half, nearly two-thirds.

1958. On nearly two-thirds you get 1 *s.* 8 *d.*?—Yes.

1959. And on the remaining one-third from 5 *s.* to 6 *s.*?—Yes.

1960. Sir *R. H. Inglis.*] The parish clerks form a company of the city of London?—They do.

1961. Have they met recently, with reference to the proceedings of this Committee?—They have.

1962. Have they passed any resolutions in reference to desiring to be heard?—They have not yet; there is a meeting fixed for next Monday evening to discuss the matter, and to decide on the measures which it may be proper for them to adopt; they are a very ancient chartered company; they have their own estates; we have eight almshouses at Brixton, which are occupied by the widows of parish clerks; they make a return each week to the Queen; one is forwarded to Her Majesty, one to the Secretary of State, and the other to the Lord Mayor; each parish clerk within the Bills of Mortality becomes a member of the company.

1963. Colonel *Fox.*] Do you consider that the population in your parish would object to quick-lime being placed in the coffins?—I think they would; I recollect in one particular instance where it was done, where the party died of cholera; it had such an effect on the body that the men could scarcely carry it; it was almost in a liquid state; it was taken into the church; they were obliged to take it out immediately and put it into the grave; there was a discharge from the coffin.

1964. *Chairman.*] It was not in lead?—No; it was talked of a great deal at the time that they should not like to have quick-lime put into the coffin.

1965. Sir *R. H. Inglis.*] You have reference in your answer, not to the effect in that one instance, but generally speaking, to taking any mode to destroy the remains sooner than in the course of nature it would take place?—Just so.

1966. Colonel *Fox.*] Those of the middling classes would not perhaps have the same objection?—Perhaps they might not.

1967. Do not you think that the effect of others allowing their relations to be buried in that way might have an effect in doing away the impression?—That is possible.

1968. Sir *R. H. Inglis.*] Your impression is, at present, that there is a strong feeling against hastening the decomposition?—I am certain of it; for those who died of cholera in my parish, I buried myself, being their undertaker; I was in the habit of going into the houses, and that was proposed to be done; it was mentioned in two or three instances, and they uniformly objected to it; and the undertaker's men would object to carry it, it would be so bad for them; I cannot describe how that coffin smelt.

1969. Colonel *Fox.*] Might not this be remedied by placing quick-lime in the grave?—We did invariably put quick-lime over the coffins of those in our parish who died of cholera.

1970. Would there be a prejudice against placing quick-lime upon the coffins?—I think not at all; we did that invariably in those cases; we threw in quick-lime, and then filled up with common earth.

1971. Sir *R. H. Inglis.*] Do you wish the Committee to understand that the parties attending the interments to which you refer, were cognisant of the fact that over the coffin, or around the coffin, had been placed quick-lime, which you say they would have objected to have had placed within the coffin?—Yes, that is the case; that in several instances the friends of the deceased persons stopped and saw the grave filled up, and saw what was done, and they made no objection.

1972. Were they aware there was quick-lime placed on the coffin for the purpose of procuring an early decomposition of the body within the coffin?—I believe they were.

1973. Still you retain your opinion that they would object as much now as at any former time to the insertion of quick-lime within the coffin?—Yes, certainly.

1974. Mr.

1974. Mr. *Vernon.*] Is a considerable expenditure resorted to generally to adorn the body within the coffin?—That depends upon the wishes of the friends; it varies very much according to circumstances.

1975. As far as the means of the parties are concerned, do they generally incur expense in dressing the body?—Yes, they do.

1976. Sir *R. H. Inglis.*] You consider it is part of the sanctity of the burial service that the body should remain, so far as the feelings of the friends are concerned, in the state in which it is deposited within the coffin?—Certainly; I have known in many instances where the parties have objected to an inner lid in the coffin; there is pitch put in to make it air-tight, many will have that and others will not.

1977. *Chairman.*] How can you reconcile that with their having leaden coffins, and those soldered?—I cannot reconcile that; those are the feelings of different persons.

1978. Colonel *Fox.*] What is the expense of the cheapest coffin made for a grown person?—About 14 *s.*

1979. Do you think, supposing there was an agreement for the general burying the poorest people, they could be made much cheaper than that?—Yes, if they were made of deal; but in my parish they have them made of elm, the same as those made for the most wealthy person, but not covered; if they were made of deal, they would not cost more than 9 *s.* or 10 *s.*, but they are so slight they give way in a very short time. We bury paupers in our parish for less than 2 *l.*

1980. *Chairman.*] Do you think the system of keeping bodies so long before they are interred could be prevented without interfering with the feelings of the people?—I believe there are many would keep them much longer if they could.

1981. Colonel *Fox.*] Supposing the burial-ground at a distance of two or three miles; what would be the additional expense of the funeral of a person of the lower class?—For a walking funeral it would require two or three sets of men; there would be only the expense of their pay in addition.

1982. What would be the additional expense?—If for the men only, it would be only about 1 *l.* additional.

1983. That would be the only addition?—Yes.

1984. If a contract were made by a parish for the interment of the parish poor, the additional expense would depend on how many funerals took place on the same day?—Certainly, that would have to do with it.

1985. If there were several on the same day, the additional expense would be less?—Yes; but that would depend on whether there should be more than one corpse put into one hearse.

1986. Would there be an objection to that on the part of the poor?—I cannot say, not having had the case before me.

1987. Sir *R. H. Inglis.*] Would there not be an objection on the part of the friends, that the parties would not be able to tell that they were attending the funeral of their own friends?—Certainly, in my opinion, there would.

1988. Mr. *Vernon.*] When you arrive at the churchyard, when there are several funerals, does it ever occur to you that the corpses are all deposited in the same grave?—Not under my own knowledge. I can give an instance of what I saw in St. Giles's cemetery, near St. Pancras church. I was there attending a funeral, and observed a one-horse hearse; they brought eight or ten pauper funerals in one hearse. Some of the friends of the deceased parties were in attendance, but very few; they were put into two graves, and the service read over them all at once.

1989. The respective mourners, when the coffins were removed, would not feel as if they were attending the funeral of their respective friends in that case?—They all stood round the two graves; they did not appear to know any particular coffin.

1990. Was no separate service read over each coffin?—No, one service was read over the whole; there was a children's grave and a grown person's grave, and the friends of those that attended stood round the graves; I think there were not more than five or six persons attended for the eight or ten coffins. It was stated to the Committee by the rector that the distance is great from the St. Giles's cemetery to the parish.

1991. Mr. *Denison.*] The hearse you saw would be much less expensive in conveying several coffins than if bodies were carried by men, and you were obliged to change the men?—Yes.

Mr. *D. R. Harker.*

18 April 1842.

1992. Colonel *Fox.*] Can you suggest any system by which paupers can be buried at a cemetery several miles out of town, supposing land obtained that would not be expensive, and yet not hurt the feelings of the relatives?—No, I cannot; other parties than paupers, labouring persons, who do not receive parochial relief, have made application to the parish; they have begged to be excused the vault dues, which are 4*s.*; they had a difficulty in raising the 12*s.* 2*d.* which includes the bearers; they would be put to great inconvenience if the cemetery were at a distance.

1993. Mr. *Ainsworth.*] The Committee have been informed that Mr. Shillibeer has invented a carriage to take the corpse and the mourners, have you seen that?—I have not; I have heard it described; it will contain only one body, and then after the body is taken to the place of deposit, turn the part which was used for the coffin into a seat for the bearers and the persons attending the funeral.

Mr. *George Yarrow*, called in; and Examined.

Mr. *G. Yarrow.*

1994. Sir *R. H. Inglis.*] YOU are the parish clerk of St. Leonard's, Shoreditch?—Yes.

1995. The Committee understand you are desirous of giving evidence before them with reference to the state of the churchyard of that parish, having understood that certain evidence had been taken on Thursday last with respect to that churchyard?—I am.

1996. The evidence taken last Thursday is in answer to question 1827; that describes the grave-yard of St. Leonard, Shoreditch, as very bad; what is the state of that churchyard?—It is far from being very bad; we have frequently graves as deep as 17 or 18 feet, without water; there was one opened only a few weeks ago without water.

1997. It is said, "There is a part where they cannot put in a corpse without its floating; I have seen a person working at the pump four hours before they could put a corpse in." Is there any part to which this applies?—Certainly not, unless they go down 14 or 15 feet; if they go down that distance or more, they would then come to water.

1998. *Chairman.*] Has it occurred that they have been obliged to pump the water out?—It has occurred, if they go that depth in one part.

1999. How long would it be before you could get the water out?—Perhaps a couple of hours, or less than that; it has generally been got out while the minister has been reading the service in the church: when the undertaker goes into the church, the grave-digger is in attendance, watching the funeral coming down; and if there is any water in the grave, while the minister is reading service in the church, the water has been baled out during that time, which could not be more than half an hour; but when there has been water in the grave, it has been in consequence of the parties wishing to go to that extreme depth. In ordinary interments there is no water, where we bury the paupers; I have seen them go 12 or 14 feet; that is a very clayey soil.

2000. Mr. *Ainsworth.*] The part of the yard where there is water at 14 feet is lower perhaps?—It is in a great part of the ground, a part recently purchased and added within the last few years; there were a great many houses pulled down to enlarge it.

2001. Colonel *Fox.*] What is the appearance of the water which comes up?—Muddy, from the soil.

2002. Is there anything offensive in the smell?—I have been there 15 years, and there never has been anything offensive.

2003. *Chairman.*] How often has it occurred that you have had to pump the water out?—Very rarely indeed; it is so expensive that they do not like to dig so deep; it is only the respectable families.

2004. Sir *William Clay.*] Is there any pump near the churchyard?—There is a pump in Orme's-row, between the Kingsland-road and the Hackney-road.

2005. Mr. *Cowper.*] What is the nature of the soil?—It is clay and gravel when we get down a considerable depth.

2006. *Chairman.*] What is the greatest length of time you have known them pump at any one period?—It might have been two hours; they might have been longer when they have been building a family vault; they require pumping to clear the ground.

2007. What

2007. What is the size of your ground?—I should think about three acres and a half or four acres.

2008. What is the size of that part of it which is subject to be flooded?—About one-third.

2009. Mr. *Vernon.*] It is not water which springs there, but what percolates through the loose soil?—I apprehend so.

2010. Colonel *Fox.*] Have you not another burying-ground for the paupers?—Yes.

2011. What is the state of that ground?—It is rather inferior than otherwise.

2012. Where is that?—In the Hackney-road.

2013. Is that more crowded than the other ground?—I think it is; but the paupers are generally buried now at the mother church.

2014. Have there been complaints from the neighbourhood of that ground?—Yes; but that originated from a plan of the churchwardens for the time being, to clear the churchyard; they took up the bodies and excavated the ground, and then buried them afresh, and packed them up close to make room during the time that work was going on: there were complaints, not from the effluvia, but the sight of the thing.

2015. When was that done?—I think it might be about four years ago.

2016. Are you aware that that was an illegal proceeding?—I am aware of it.

2017. Mr. *Kemble.*] The complaint was only as to the sight?—That was all the complaint I heard.

2018. Colonel *Fox.*] What were the names of the churchwardens?—I cannot say.

2019. Were they the same who are now churchwardens?—Certainly not; they change every year.

2020. Sir *William Clay.*] When you state that the churchyard contains three acres and a half, do you refer to the churchyard attached to Shoreditch church?—Yes; but the evil of interment is very much removed now, because we have so many district churches to which they are taken.

2021. What is the annual number of the interments in the churchyard of St. Leonard's, Shoreditch?—I think from six to seven hundred.

2022. How many are there in the pauper ground in the Hackney-road?—I should think from 100 to 150, at a rough guess.

2023. When was burying in that ground discontinued?—We bury there occasionally now, but not so many.

2024. Have you any regulation as to the depth below the surface which the last coffin must be put into a grave, in your churchyard?—We generally consider about three feet; we consider the grave full if there is only three feet; or if it is within four feet, we do not allow another to be put in.

2025. When a grave is full, how near do you permit a fresh grave to be opened?—As close as they can get it; sometimes adjoining.

2026. Colonel *Fox.*] So as to expose the coffins, do you mean?—I mean within a few inches; I never saw the coffins exposed.

2027. *Chairman.*] How can they prevent the mould tumbling down?—They shore it up with shoring boards; they cannot dig without that.

2028. With reference to the bodies that were dug up illegally by the churchwardens, what was done with those?—They were all buried again; the only object of that was, that the grave-digger, in order to save his labour, had dug shallow graves, four feet or five feet deep, whereas they could go 12 feet or 14 feet deep, so that that ground was lost, and they had not room for interments; they therefore disinterred the bodies out of the ground, and buried them again, availing themselves of the increased depth.

Mercurii, 20° die Aprilis, 1842.

MEMBERS PRESENT.

Mr. Ainsworth.	Lord Mahon.
Colonel Fox.	Mr. Vernon.
Mr. Kemble.	Mr. Yorke.

W. A. MACKINNON, Esq. IN THE CHAIR.

George Thomas White, Esq. called in; and Examined.

G. T. White, Esq.

20 April 1842.

2029. *Chairman.*] YOU are a practising barrister?—I am.

2030. The object of this Committee is to ascertain whether it is necessary to legislate for the purpose of preventing interments within large towns or populous places. The Committee have divided the subject of their inquiry into three points: one, as to the necessity of removing the nuisance of interring within large towns; the second subject of inquiry is, a suggestion of the remedies for the nuisance; and the third point of inquiry will be, the way in which those remedies may be best applied, so as not to interfere with vested rights: the Committee will be happy to have any information you are enabled to give on those points. Have the kindness, in the first place, to state what is your opinion as to the expediency of removing the interment of bodies from large towns?—I only know of one case in which I received any inconvenience or injury myself, but on one occasion I have sustained that. In November 1838, I attended the funeral of a deceased friend, Mr. Wigg, in the churchyard of St. John's, Waterloo-road; the grave was a deep one, I believe nine feet. Before I attended that funeral we were in the church a considerable time, and then went out to the funeral, and I stood very near the grave. I went after that, on that same day, out to dinner, and I was immediately on leaving, indeed before I had left the churchyard, affected by a distressing sensation, far above what I could attribute to the death, though I regretted it, of my friend. I felt still worse during the whole evening at dinner, and after dinner; I returned home that night, and I kept my bed and my room, and had a medical attendant for upwards of a week. I revealed to him what I had done, and he attributed it to some miasma I had been affected by, from the decomposition of matter in the grave; and my opinion is that that was the cause of my illness. I was perfectly well when I attended the funeral.

2031. Colonel *Fox.*] Did you observe any bones or coffins in the grave?—No, I did not look into the grave.

2032. Mr. *Kemble.*] This is not an old ground, is it?—No; it has existed about 20 years, I should think.

2033. Colonel *Fox.*] Is it a damp locality?—It is.

2034. Mr. *Kemble.*] It is not a densely populated district, is it?—There are a good many houses round it; there is the Commercial-road immediately behind it; the population is very dense just round it. I know the district well; I lived in Stamford-street for seven years; I kept my house above a week, and took medicine for some time after that.

2035. *Chairman.*] Did you entirely recover at the end of the week?—No, I did not recover for many weeks afterwards, entirely; I was able to go about in my profession in about a week or ten days, but I was depressed for some weeks.

2036. Colonel *Fox.*] Did you feel any unpleasant taste in your mouth?—Yes, I was conscious of that, as I stated to Mr. Green, then of Essex-street, and now of Pimlico, who attended me; and to whom I stated the fact.

2037. Mr. *Kemble.*] Do you know whether any other of the attendants were affected in the same manner?—I cannot say; there were only the children and a sister of the deceased.

2038. Mr. *Yorke.*] Was the first visitation of the illness sufficiently distinct to enable you to trace it to that cause?—So much so that it was before I left the churchyard I felt sensible of the affection, by the temporary depression.

2039. You were sufficiently well to go out to dinner that same day?—Yes; but I was perfectly miserable the whole of the evening; I was quite ill, certainly.

2040. *Chairman.*] Do you conceive this miasma would have affected you as much as it did, had you not been in low spirits in consequence of the loss of your friend?—I was not in low spirits at all in consequence of the loss of my friend; it was no blood relationship; it was merely a friend.

2041. You have no doubt of the injurious effect of that exhalation arising from the grave?—I have no doubt whatever of it.

2042. Mr. *Kemble.*] Had you been suffering previous illness?—No; I was in perfect health.

2043. Mr. *Yorke.*] Is your general health good?—It is perfectly good.

2044. Colonel *Fox.*] Have you heard of any similar instances of persons whom you have known?—No, I have not talked about it; but I have read a good deal on the matter.

2045. *Chairman.*] Is it your impression that, generally speaking, it would have the same effect on others as it had on you?—Yes. I can mention that, on another occasion, I attended the funeral of the wife of another friend, Mrs. Binns, the wife of Mr. Thomas Binns; that was in the vault of St. Clement's Church, about 15 years ago; I perceived an unpleasant smell and dampness in that vault, but it did not affect my health at all.

2046. Colonel *Fox.*] Was that in a large vault or a small one?—A large vault under the church.

2047. Have you anything further to state on the subject of the nuisance?—They are now excavating the Strand, I suppose, with reference to the sewers, and I have been affected with a very unpleasant sensation and smell, in going to my chambers in the Temple, to which I go every day; so much so that I get out of the Strand now, and go the back way generally.

2048. May that have arisen from the sewer?—I cannot say.

2049. Are you aware that there was no sewer previously in that place, and that they have been making a new one?—I really do not know what they are doing.

2050. Mr. *Ainsworth.*] The smell arose from the opening of the ground for the purpose of making a new sewer?—I do not know for what purpose they opened the ground, but it was open about 30 yards, near Cowdry's brush manufactory, the corner house in the Strand; there was a very noxious smell.

2051. You did not perceive any smell there before that ground was opened?—No.

2052. It did not proceed from the churchyard?—No; I did not notice it until the opening of the ground. I ceased to pass that way while the opening continued.

2053. *Chairman.*] Have you anything further to state on the subject of the nuisance?—No; I do not recollect anything further.

2054. With regard to the remedies to be suggested, as a professional man is there anything you would suggest?—I would have all the dead bodies removed from the towns if I could, and from places where people live.

2055. Are you of opinion a legislative enactment should be made to prohibit their being interred in towns?—I cannot venture to suggest what measures should be taken; I should be very happy if it was done.

2056. You think it ought to be done?—I did not like to say that I think it ought to be done; that is a matter for the Committee. I wish to state that with reference to the burying-ground in Portugal-street, in the year 1819, when I was a pupil with Mr. Tidd, I resided in Lincoln's-inn-fields, and I daily went down from Lincoln's-inn-fields, the north side of them, along Portugal-street, and passed that burying-ground, and whilst graves were being dug there; I was constantly annoyed by the stench of the ground.

2057. Lord *Mahon.*] Have you any knowledge of the ground later than 23 years ago?—Yes, I have very often passed it since that.

2058. With the same result?—When there have been graves opened I have smelt the same offensive odour.

2059. Colonel *Fox.*] This was long previous to the erection of the hospital?—The building used as a hospital was then the parish workhouse.

2060. Are you aware that it was denounced as being unfit for a hospital?—I have seen something of that sort in the newspaper. There is another burying-ground

G. T. White, Esq.

20 April 1842.

ing-ground near the top of Drury-lane, between Russell-street and Long-acre; it belongs to one of the parishes, I rather think St. Martin's-in-the-fields; I have perceived the same offensive smells from that burying-ground.

2061. *Chairman.*] From what you have experienced, it would appear that every burying-ground in London, when opened, has an offensive smell?—I have no doubt of it.

2062. Your attention was not turned to that subject so much, perhaps, until you had an illness arising from the effluvia?—I beg to say I always felt it a great nuisance, but I have had no sensible illness except in the instance I have referred to in my evidence.

George Alfred Walker, Esq. called in; and further Examined.

G. A. Walker, Esq.

2063. Colonel *Fox.*] YOU have heard the evidence given by Mr. White?—I have.

2064. Will you state what you know regarding the opening in the street at present going on in the Strand?—I think I stated in my evidence, when I had the honour of being examined before a former Committee of the House of Commons, that this neighbourhood was exceedingly ill drained; perhaps in consequence of that inquiry, or some other cause, the Commissioners of Sewers have bestirred themselves, and this sewer has been brought through the Strand; it was necessary to excavate round the church, near the pathway Mr. White describes, to bring the sewer between that and the church, and a number of bodies and bones have been disturbed. A friend of mine, Mr. Plum, living on the north side of the church, was annoyed by the stench, more particularly during the time they were burying the human bones exhumed from this place; the whole were thrown upon the arch of the sewer and buried.

2065. Is it your opinion that the stench arises from human bodies, and not the opening of any former sewer?—There was no sewer there. It will be in the recollection of the Members of this Committee who did me the honour to accompany me on Friday the 8th of April, for the purpose of inspecting some of the burial-places in my district, that a quantity of human bones, covered slightly with earth, were turned up in the poor ground near the almshouses, St. Clement's-lane, Strand, where they had been deposited a very considerable time. Although these bones were denuded of their flesh, the smell was exceedingly offensive. I believe that bones, independently of their tegumentary appendages, may prove injurious to health; and this opinion is fully corroborated by the following facts: M. Ollivier, a well-known French physician, whilst visiting a cellar where old bones were stored, was seized with giddiness, nausea, tendency to vomit, and general uneasiness; subsequently he suffered from violent colic, with profuse diarrhœa, which put on the dysenteric character, and lasted for three days. M. Chevallier, in noticing this accident, mentions his having been affected somewhat in the same way when exposed to the emanations of dead bodies.

2066. Mr. *Kemble.*] This sewer is in the middle of the street?—Yes, it was part of the grave-yard formerly. I should think it was about five or six and thirty years ago when the last body was buried there.

2067. Mr. *Yorke.*] Do you know positively when this ceased to be a churchyard?—I do not.

2068. Can you state positively that it was a churchyard within five and thirty years ago?—I know that there was a body exhumed, in a leaden coffin, and the date was 1789, and the man who struck his pickaxe into this coffin was affected by the stench; that was the statement he himself made to me.

2069. Colonel *Fox.*] With regard to the burial-place in Portugal-street, is there any public hospital to the east of it?—There is.

2070. Do you not consider that a very improper locality for a hospital?—I do.

2071. What hospital is that, and under whose sanction is it?—I remember seeing the late Sir Astley Cooper, and hearing his opinion on the subject; having occasion to go to him with a patient of mine, I mentioned the circumstance to Sir Astley, and said "I was sorry to be obliged to say it was an improper site;" he said, "Well, Mr. Walker, I agree with you; but had not you better see the Bishop of London on the subject?" I said, "I had no acquaintance with his lordship, and that my time was so very limited I should not be able to go;" subsequently I brought

I brought out my book. The Council of the College of Surgeons, I have been informed, have expressed their disapproval of the site of the hospital. *G. A. Walker*, Esq. 20 April 1842.

2072. Do you know whether this opinion has reached the Bishop of London?—I had two interviews with his lordship upon the subject of interment generally; he received me most courteously, and expressed his conviction that a change must and should be made in the present localities and modes of interment. I mentioned to him the circumstance of shocking desecrations having been perpetrated in my neighbourhood, and that while in Paris I read in a London newspaper that his lordship had been present at an interment in the city, and had seen 13 sculls thrown up; he said, "Yes, it was so." I told his lordship that they were thrown up wholesale in my neighbourhood; that I was informed that upwards of 500 sculls had been thrown up in one day and deposited in another part of the grave-yard, and that the grave-digger had amused himself by chalking the number on the wall.

2073. Have you reason to believe that there are a larger number of patients die in that hospital than in others?—I have no connexion with that hospital.

2074. Who are the medical officers?—Dr. Fergusson, Mr. Partridge, and some others, whom I do not know.

2075. Are you acquainted with any of the individuals who have been treated in that hospital?—Many patients I dare say go there; I believe they receive very kind treatment.

2076. Mr. *Yorke.*] What is the number of patients it will contain?—I should think it might hold from 300 to 400.

2077. Mr. *Ainsworth.*] You do not know who were the individuals particularly concerned in the erection of this hospital?—It was an old house, for the reception of the poor; it has been taken as an appendage hospital to King's College, it being thought necessary that every medical school should have a hospital.

2078. Colonel *Fox.*] Was there any objection made to this hospital being used before it was completed?—I believe there were protests made in the public papers; I made none, for my conduct in the matter has been very passive; I am sorry to see that such a place is used as a hospital, for I think it is very improper.

2079. Mr. *Vernon.*] A statement was made within your hearing on a former day, that the carriers of a coffin were exceedingly annoyed when some lime was put into that coffin; would there be any deleterious effect likely to arise to the carriers of a coffin from that circumstance?—I think that would depend very greatly on the condition of the body.

2080. What would be the direct effect on the body, supposing the body to be already in a state of putrefaction by the introduction of lime?—I am scarcely prepared to answer that question.

2081. If lime is laid on the exterior of the coffins the effect on the corpse would be nothing?—Nothing.

2082. Would there be any beneficial effect arising in respect of the gases which issue from the coffin?—The lime on the coffin, if put in in the slacked state, would be an absorbent; there can be no doubt of that; that is, in the form of powder.

2083. In an unslacked state the effect would be still greater, inasmuch as it had not received its portion of carbonic acid gas?—Precisely so.

2084. A good deal having been said on the subject of the rapid decomposition of bodies, and there appearing some confusion on the part of the witnesses with regard to the effect of such decomposition, will you state your opinion whether the purposes of interment are not best fulfilled where rapid decomposition does take place?—There is no question, supposing there is a sufficient quantity of atmospheric air to dissipate the products of corruption. About $\frac{12}{13}$ths of the human body must dissipate, and either mix with the earth or pass off in a gaseous form.

2085. The more rapid the decomposition of each individual body, the less the object in which the corruption would reside, and from which injury would emanate?—Unquestionably.

2086. Lord *Mahon.*] Supposing quick-lime to be put into a coffin at the same time with the dead body, what would be the period, under common circumstances, to elapse before the entire decomposition of that body?—That question I cannot answer; it would depend very much on circumstances, on the condition of the body before death, and so on.

G. A. Walker, Esq.
20 April 1842.

2087. What would be the average length of time?—That I cannot answer. I know lime has been very extensively used in some places, particularly in Enon Chapel. I have no doubt if the Committee had obtained admission the other day, they would have been struck with the stinking odour. I know that lime has been inserted in enormous quantities, and that the bodies have been consumed in less than a twelvemonth.

2088. Mr. *Vernon.*] You object to a damp ground?—No.

2089. What is your objection to interment in a damp ground?—That heat conjoined with moisture rapidly assists putrefaction. With regard to my objection of placing bodies in a damp soil, I think it is a very proper one, for we have the authority of several eminent and learned medical men in France, who invariably have chosen, so far as they have had an opportunity, high and dry soils; for a clayey soil will retain the gas for ever. If any epidemic were to visit us in consequence possibly of the over-gorged state of our churchyards, I would say, break down the tombstones and cover the surface with clay a foot deep, and then you will be safe.

2090. By confining it?—Yes.

2091. Would it not be still better than confining it that you should furnish the utmost facilities, by access to the open air, for rapid decomposition?—Most undoubtedly, that is the whole secret of cemeterial interment:—sufficient space, and high ground.

2092. *Chairman.*] You are aware that when the gas companies occasionally open the public streets, there is an effusion of very strong odour; are you certain that the effluvia in the Strand was not from that cause?—Yes; they are perfectly distinct. The one is carbureted hydrogen. The gases given off from dead bodies are of a compound nature, and are readily distinguished by their peculiar odour, and cannot be mistaken by any one who has attended to the subject.

Jovis, 21° *die Aprilis*, 1842.

MEMBERS PRESENT.

Mr. Ainsworth.	Mr. Kemble.
Sir William Clay.	Lord Mahon.
Mr. Evelyn Denison.	Mr. Redhead Yorke.
Sir R. H. Inglis.	

W. A. MACKINNON, Esq. IN THE CHAIR.

Dr. *George Frederic Collier*, called in; and Examined.

G. F. Collier, Esq.
21 April 1842

2093. *Chairman.*] WHERE do you reside?—No. 32, Spring-gardens.

2094. Do you practise as a medical man at present?—Yes, as a physician.

2095. Are you concerned in any way with the cemeteries as a physician.—Not in the least.

2096. You are aware of the object of the investigation pursued by this Committee; will you have the kindness to state generally to the Committee your impression with regard to the interment of persons within large towns?—My impression is that it must necessarily be injurious, not as the cause, but as one cause *inter alias*. I believe that no single cause produces fever, but that the effluvium given off from the human body tends to depress, impair, and enervate the human frame, and I look to that as one cause *inter alias* of fevers; for my experience of 23 or 24 years tells me it is so.

2097. Do you consider it to be amongst the leading causes, or a secondary cause?—It is a difficult matter to answer that question, there being so many links in the chain; it is, at all events, what I should denominate a common cause, animal effluvium.

2098. Are you prepared to state what description of fevers that is most likely to produce?—Yes; I speak from experience when I say, that animal effluvium would be likely to produce fevers of the low typhoid kind, with the fluids impaired.

2099. Are

2099. Are such fevers very prevalent in this town?—I am not aware that they are at the present time. I am not attached to any fever hospital, therefore I am not aware whether at this present moment they are particularly prevalent. I do not practise much among the lower classes.

2100. Lord *Mahon.*] Have you ever observed cases where the health of the patient seemed injuriously affected by the close neighbourhood of a grave-yard?—Yes; I have reason to think so.

2101. And you have traced the illness, or its aggravation, to arise from the neighbourhood of that grave-yard?—As one of the causes; but I would speak generally of animal effluvium having that effect.

2102. *Chairman.*] Do you consider that the effluvium arising from putrefied human bodies is more injurious than that arising from other animal matter?—I should doubt that; I should conceive that the effluvium arising from living animal matter is more deleterious than that which arises from the dead; with respect to the doctrine of fevers I have found it so.

2103. You think that that is one perhaps of the causes of the greater mortality in town than in the country?—No, I am not prepared to say that; I think that the causes of fever are extremely various; that would be a question of statistics, and I could not answer it; I could only answer to the point generally, that it is one of the causes; that animal effluvium will act as a depressing poison in any way in which you disturb the innervation, whether by impressions made on the system *ab externo*, or by the absorption of animal effluvium, other causes conspiring, for there is no such thing as one cause of fever; but too commonly that is assumed to be the cause which has produced the effect, because it is the easiest mode of jumping to a conclusion.

2104. The gaseous matter or effluvium arising from such a vast number of bodies being interred within the precincts of this town must be very considerable?—In all probability; it would depend entirely on how far precautions are taken to prevent it; in burials in the earth it would depend entirely on how far the elements which are thrown off from the putrescent matter from the body itself are neutralized and rendered innocent by due admixture with the earth.

2105. In the course of your practice you have not been able to ascertain clearly the fact at what distance this gaseous matter or effluvium arising from the putrefied animal matter becomes innocuous?—I should imagine it would be injurious at any distance at which it is inhaled; that is to say, our senses are given to us for the purpose of warning us of danger; and I should say that in any atmosphere where it is appreciable by the sense (that is, by the sense of smell) it would be injurious; if it were so largely diluted as to escape being appreciated by the smell, I should doubt its being injurious.

2106. But the moment it is smelt you think it injurious to health?—I should think that in all probability it would be so, and that it would become one of the causes of fever. I can illustrate this by what I have seen when occasionally attending funerals, whether public or private funerals; I have observed that where persons from great curiosity, or from tenderness to the memory of the dead, have descended into the vaults, they have been within a few days afterwards affected with fever and cold, and that the depression is greater on account of the circumstance of such individuals having been under the operation of the poison, that is, under the operation of the effluvium of the vault. I think it has been commonly noticed with regard to attendance at royal funerals, for instance, in this country; it seldom happens where parties descend too curiously into the tomb, but what some person or other is affected apparently with cold or with fever, but other causes are co-operating. There is, perhaps, some depression of spirits; there is the cold of the vault, and in addition to that the effluvium of the vault. I have observed that that is pretty generally to be detected in all vaults, however careful they may be, not excepting cemeteries. I have detected it in cemeteries. I am speaking of catacombs, where the undertakers have not been careful in sealing the coffins.

2107. You are aware that with regard to the churches along the Strand, there are openings from the vaults under those churches to the public streets?—Yes.

2108. Do you consider the gaseous matter, or the effluvium, arising from those vaults, mixing with the atmosphere in the streets injurious to the people who are passing by?—Scarcely; I think that there the transition is too rapid; persons merely passing would escape the effect.

2109. It cannot be beneficial to the air of London to have that effluvium mixing with it?—No; quite the contrary, because it becomes one of the depressing causes inducing fever.

2110. Mr. *E. Denison.*] You said that in attending royal funerals it commonly happened that people were injuriously affected?—I think it has been so noticed, and I have noticed it myself.

2111. Considering the circumstances of the vault where royal funerals take place, it can hardly be that cause of illness which would arise from the offensive matter which would be exhaled in crowded churchyards?—I think the greatest care does not always succeed in preventing the exhalations; I am aware that they take great care. I presume, that supposing there is exhalation there, it would so act.

2112. Is not that a supposition which is not borne out by the fact?—So far as regards my view of the matter it is borne out by this circumstance, that whether it were simple effluvium from the bodies, or whether it was any disagreeable effluvium from the close confined air in the tombs, it will be quite sufficient, because what I take my stand upon is, that anything which tends to depress the powers of life tends to produce fever.

2113. Sir *R. H. Inglis.*] Is there any given quantity of gaseous matter in a human body, which evaporates, where a leaden coffin is first burst open by the expansive force of such gaseous matter, or does it generate such gas after the leaden coffin has been burst open?—There is no doubt in the first place you will have large quantities of gas given off, and then the decomposition will be more gradual, but the exhalation will go on gradually. There will be first an immediate exhalation, then a rapid exhalation, then subsequently a slow exhalation, which is a work of considerable time.

2114. It is not then a sudden development and expansion of a particular gas once for all which passes from the coffin into the air, but it is a continued series of gases to which you refer as proceeding from the human body in a state of decomposition?—If you are speaking of a single body, I should say that the elimination of a large quantity of gas is the more dangerous, and then that the gradual exhalation from a single body would be very much less dangerous; but if you have a number of bodies together, the gradual exhalation becomes an accumulated dose.

2115. Mr. *R. Yorke.*] You said that persons attending royal funerals commonly caught colds?—I have said no such thing. I would illustrate what I have already said, by telling you that, if I am compelled by circumstances to attend a funeral, I make it a rule never to go down into the vault. I attended the funeral of a friend a short time ago at Christchurch; I did not descend into the vault, and I think it is imprudent to do so, because I think the circumstance of persons being depressed in spirits at the time, the circumstance of the effluvium pervading the vault, (which, as far as my observation goes, it does,) and other circumstances concurring, may develope fever, but I do not think that singly it has the power to do so.

2116. *Chairman.*] Can you state any particulars regarding Elim Chapel?—Yes; in the year 1827, I think it was, I attended some cases of fever in the neighbourhood, and my attention was directed by the family to the stench in the neighbourhood, and it became disagreeable to me. It was a duty which I had to perform, but it was disagreeable to me to attend these cases: they were cases of fever, and I advised them to apply to the authorities about it. It seemed to me at the time that the stench in the court was produced by the decomposition of animal matter in the vaults; and the impression in my mind is, that water had got into the vaults, that part of it had been pumped out, and the other part allowed gradually to exhale. I speak of this as an occurrence 15 or 16 years ago. I never examined the vault, and I cannot speak of my own knowledge, except that the odour in the court was extremely disagreeable.

2117. Was there much typhus fever in the court?—I had three cases in the house opposite the chapel; but my attention was first directed by the family to the circumstance, and I advised them to get out of the court as soon as they could.

2118. Whereabouts is this Elim Chapel?—It is about half way up Fetter-lane.

2119. Is the water now at the bottom of this vault of Elim Chapel?—I have not the slightest knowledge of that circumstance; I have not applied myself at all to the investigation of this matter, not having had five minutes notice of giving

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my evidence, nor did I require it, for it appears to me that the doctrine of fever is contained in a nut-shell. *G. F. Collier*, Esq.

21 April 1842.

2120. To your knowledge, in this court the smell was offensive arising from the bodies deposited under the chapel, and that fever broke out?—The smell in the court was extremely offensive, but of my own knowledge I could not prove that it arose from the decomposition of animal matter within that chapel. My attention was directed to the circumstance by the report in the neighbourhood and the statement of my own patients.

2121. Are the bodies under Elim Chapel put into leaden coffins or common coffins?—I have not the slightest knowledge of that circumstance.

2122. Is there anything further you wish to say to the Committee?—Nothing whatever; all I wish to say may be embraced in one sentence, it is simply this: that there is no such thing as the one cause of fever; various causes must conspire to produce it, and one of these, in my opinion, is the depressing effect of the effluvium of human bodies.

Thomas Tagg, called in; and Examined.

Thomas Tagg.

2123. Sir *R. H. Inglis.*] YOU attended this Committee on Monday last?—I did.

2124. You stated that you had heard that evidence affecting you, and the burial-ground belonging to you, had been taken on the 14th instant, and that you considered such evidence to be incorrect, and requested an opportunity of rebutting it?—Just so.

2125. The Committee granted that request, and desired at the same time that you would bring with you the register books of your burial-ground. Do you attend accordingly for the purpose of rebutting the evidence which you understand to have been given against you and your burial-ground; and have you brought with you the register books of such burial-ground, according to such direction of the Committee?—Yes, I have.

2126. Will you produce those books to the Chairman?—Yes.

[*Two register books were handed in accordingly.*]

2127. Are those books which you have now delivered to the Chairman the original books of your burial-ground?—The original books were given up to the proper registry office appointed by Government under an Act of Parliament, and we have preserved a copy of them.

2128. For a part of the time, probably, the books now delivered to the Chairman are original books?—Yes.

2129. For what period are they original books?—About seven years.

2130. Have you read the evidence to which you refer as affecting the character of yourself and your burial-ground?—No, I have not read the evidence; I was informed of it by a person who was present.

2131. By whom do you apprehend such evidence to have been given?—I consider that it was given by a man of the name of Miller.

2132. Can you state to the Committee the purport of the evidence which you regard as injurious to yourself?—The evidence which he gave with regard to removing a great number of bodies from the graves, and throwing them into pits which had been dug in other parts of the ground. I think I was told that he said he had dug about twenty of these pits and thrown bodies into them, which I consider to be altogether false.

2133. What evidence do you propose to produce to the Committee to prove the correctness of your present assertion, and the falsehood of the evidence given by the said William Miller on the 14th instant; are you perfectly cognizant of the facts of the case yourself, or do you desire to produce witnesses in corroboration of your present assertion?—I believe no such circumstance could have occurred without my observing it, as I am in the habit of going to the ground sometimes once a week, and sometimes twice or thrice a week.

2134. Was William Miller ever in your employment?—He was never in my employment; he was employed by the sexton; I never employ the grave-diggers.

2135. Do you state to this Committee that there were or were not 20 pits, or any number of pits, dug in your burying-ground?—I do not believe that such a

Thomas Tagg.

21 April 1842.

circumstance could have taken place without my knowledge, and I never saw any pit or pits dug for any such purpose.

2136. If your sexton had ordered such pits to be dug, must you, in the course of your business in superintending your burying-ground, have observed the fact?—I think I must have known it.

2137. Then, any witness who has stated that such pits were dug, must, in your judgment, have given incorrect evidence?—Mr. Caugh, who is present, and who is on the ground more frequently than myself, he being the person who reads the service, and resides very near there, can, no doubt, speak to that fact more directly than I can; but, as I observed before, in all my attendances at the ground I never observed any irregularities of that kind.

2138. And you state to the Committee, that at least once a week you visit that ground?—In a general way, except on account of ill health, distance, or circumstances of that kind. I go there once a week, and sometimes twice or thrice a week.

2139. Is the ground forming the subject of these questions consecrated or not?—It was not consecrated by an ordained clergyman of the Church of England, but it was religiously and solemnly set apart for the purpose of burials by one of the Wesleyan ministers.

2140. In what year?—In the year 1820.

2141. Do the volumes which you have handed in to the Chairman contain a full and true account of all the burials which have taken place since the year 1820?—Every one of them, to the best of my knowledge.

2142. Do they form a consecutive series of number, or, if not, can you state to the Committee what is the aggregate number of bodies so buried in your ground?—9,500 since it was first opened.

2143. What is the area of the ground in question?—I never had it correctly measured, but I understand it is about three quarters of an acre, or from that to an acre.

2144. What is the greatest depth to which a grave is dug?—We can go about 14 or 15 feet deep.

2145. Without finding water?—Before we get to water; sometimes in the autumn, after a rainy season, we cannot, perhaps, go more than 12 or 13 feet, but in a dry season we can go 15 or 16 feet.

2146. Do you propose to produce Mr. Caugh as a witness to negative the assertions made, as you understand, by William Miller?—Yes, I believe he can contradict them better than I can.

2147. *Chairman.*] How many graves have you with stones over them as mementoes of the dead?—I am not sure of the exact amount; I have never counted them, so as to take the exact number; but I think about fifty.

2148. What unoccupied ground have you?—I should consider that not one half of the ground is now occupied.

2149. Not one half occupied of three quarters of an acre, with 9,500 bodies?—I think, according to the plan on which we inter them, you will find that that space of ground will contain more than that number.

2150. Sir *R. H. Inglis.*] Is the ground to which these questions have referred freehold?—It is freehold; I purchased the freehold.

2151. Is it attached to any chapel?—There is a Wesleyan chapel adjoining, but it is not connected with the chapel.

2152. *Chairman.*] What is the plan which you say was adopted to put this number in the ground?—By laying it out in regular rows, and measuring off the ground, so that each grave will be dug in its proper place. I think the sexton has drawn out a rough sketch at the commencement of one of the register books, which perhaps will illustrate my meaning.

2153. Explain to the Committee for their satisfaction how you account that you can by any management, or by your management, such as it is, in three quarters of an acre of ground, not occupy one half of it, and yet deposit in it 9,500 bodies?—I think if that plan is referred to it will explain the mode of doing it.

2154. How many do you put in each grave?—We consider that at least eight bodies may be put in each grave.

2155. What is the depth?—Supposing we go fifteen feet deep, reckoning one foot as the depth of each coffin, it will leave four or five feet, I think, above the last coffin which is put in.

2156. Mr. *E. Denison.*] How many superficial feet do you reckon for a grave?—About ten feet.

2157. Mr. *R. Yorke.*] Up to how near the surface of the ground do you continue to put in coffins?—To about three or four feet.

2158. Each coffin would occupy how much space of ground in height?—About 12 inches, I consider, on the average.

2159. Lord *Mahon.*] What fee do you ask for each funeral?—10*s.* for a grown person, and 5*s.* for a child, in one part of the ground.

2160. It has been stated in the evidence to this Committee that the wood of the coffins is burnt in the house of your sexton; is that the case, so far as your own personal knowledge extends?—When a corpse has been completely decomposed I have understood that the coffin, being completely decayed or rotted, has been taken out, and I believe in one or two cases it may have been burnt; I have never seen any burnt; I have seen wood which has been thrown out, but it has been in a state of decay and rottenness.

2161. Am I to understand from the answer you have just given, that the wood of coffins has, with your sanction, been burnt in the house of your sexton?—Not with my sanction.

2162. To your knowledge?—Not to my knowledge; I have never seen it burnt.

2163. If it has not been burnt to your knowledge, how is it that you have stated in a recent answer that you were aware of the circumstance?—I have seen pieces of decayed wood left in the shed where the tools were kept, but I never sanctioned any proceeding of that kind; my instructions always have been that if a body is completely decomposed, the remains should be carried down to the depth of the grave, if that grave has been opened after the decomposition of the body.

2164. Am I to gather from your previous answer that you did or did not know of the fact that the wood of the coffins was burnt in the house of your sexton?—No; I cannot say that I knew it.

2165. And yet, in a previous answer, you stated you were aware of it?—I was aware that it was taken, and left in the yard adjoining the sexton's house.

2166. For what purpose did you suppose it to be left?—I supposed it was taken there for the purpose of burning, and that the sexton probably might have taken it there.

2167. And yet you state that you did not know of it being burned?—I had no proof that it was burned; but I supposed, from its being taken there, that it was taken there for that purpose.

2168. Did you interpose or remonstrate?—I have frequently given orders to the sexton that nothing of the kind should be thrown out of a grave, but that it should be laid at the bottom of the grave, if any grave had been opened where the bodies were decomposed.

2169. Was it after you had repeatedly given these orders, or after you had given any one of them, that you saw this wood piled in the sexton's yard for burning?—I believe I have given such orders both before and since that time.

2170. When you found your orders disregarded, what course did you take?—I expostulated; and I have not observed anything of the kind for a great length of time, which I suppose has been in consequence of the orders I gave.

2171. When was it you last observed this?—I have not seen anything like it for the last year or two, I think.

2172. Colonel *Fox.*] Have you ever received any complaints with regard to these subjects from relations of the people who have been buried?—No relations have come to me to make any complaints; I have heard that there were complaints some time ago by some parties, who saw the sexton remove a corpse out of a purchased grave, which he did not expect to find. A person purchased a grave in a particular spot, and in digging that family grave, a coffin was taken out and put into one adjoining; and there were complaints made at the time respecting the circumstance.

2173. Lord *Mahon.*] Was the wood of the coffins ever burnt in your own house?—Oh dear no.

2174. Colonel *Fox.*] Have you ever observed any effluvium or bad smell yourself?—No.

2175. Have you had complaints on that subject?—No; not at all.

2176. *Chairman.*]

Thomas Tagg.

21 April 1842.

2176. *Chairman.*] You inter in this grave-yard persons of all religious denominations?—We do.

2177. You inter persons belonging to the Church of England?—We do.

2178. Are those persons aware that the individual who reads the funeral service is not an ordained clergyman of the Church of England?—I should think they must be aware of it.

2179. In what manner?—The person who has officiated there for the last 14 or 15 years is well known in the neighbourhood, and most of the persons reside in the neighbourhood who bury there; we have never been asked the question whether he is an ordained clergyman of the Church of England or not, and there never was any objection made on that ground.

2180. Have you ever been threatened with an action for misdemeanor in removing any dead bodies?—No; I never was threatened with an action on that ground.

2181. You have never been accused by any of the relations of any person?—Not to my knowledge; I have no recollection of anything of the kind.

2182. Are you in the habit of interring persons who have been dissected?—Yes; we have received a good many.

2183. What number in one year?—Last year there were 16, but there were more the year before.

2184. Have you had altogether as many as 300?—The register-books will show it.

2185. Lord *Mahon.*] Have you, directly or indirectly, received any profit or emolument whatever from the wood of the coffins?—None whatever; the fact is, it could be of no value in that state of decay.

2186. *Chairman.*] Is there any one whom you can bring forward to deny the statement of William Miller?—If the sexton had been living, I have no doubt he would; but, unfortunately, he is dead.

2187. Mr. *Kemble.*] I think you said the fee on a burial was 10*s.*; does that include the service of the minister?—Yes, in the lower part of the ground; in the middle part of it it is 14*s.* for a grown person and 7*s.* for a child; but the front part of it is a guinea for a grown person and half-a-guinea for a child.

2188. *Chairman.*] Are you at all connected with the corporation of the city?—I am.

2189. Are you aware that the common council has presented a petition to the House of Commons complaining of burials in your ground?—I am quite aware of it; and I would beg leave to observe, that it is not my wish at all to throw any difficulties in the way of the establishment of cemeteries. My object in coming forward here has been simply to vindicate the character of the ground, as well as my own character.

2190. How do you explain that the ground is in a proper state, if the city of London have presented a petition to the House of Commons against you?—I do not apprehend that it applies particularly to me. My ground is a long distance from the city of London.

2191. You do not apprehend it applies to your ground more than to others?—No.

2192. Mr. *R. Yorke.*] What time do you consider to be necessary for the decomposition of a body?—That depends entirely upon the state of the ground. If it is put into a shallow grave with a light earth, I should say that it would decompose in 10 or 12 years. If it was put a great depth in the ground, and the ground was in a wet state, it would be much longer, especially the coffin.

2193. *Chairman.*] Is your ground surrounded by a wall?—It is surrounded by a wall.

2194. On every side?—On every side except the part of the ground where the chapel and Sunday-school stand.

2195. Can anybody passing see what is going on in your burying-ground?—Yes; the front iron work is open, and the gates are standing open all day long.

2196. Is there not a railway which passes very near it?—The railway comes very near it; it comes within a few yards of one corner of it.

2197. Did Mr. Poole, a clerk of the railway company, ever make any observation, or say anything to you upon the subject?—I do not know such a person; no person made any complaint to me respecting it.

2198. Mr. *Kemble.*] You spoke of the chapel and school; are they built on the ground?—No; they are quite a different property.

2199. They

2199. They are not built on your freehold ground?—No; it is a chapel in the Wesleyan connexion, and it is held in trust for the Wesleyan connexion.

Thomas Tagg
21 April 1842.

Henry John Parker, called in; and Examined.

2200. *Chairman.*] YOU belong to the police force?—I do.

Henry John Parker.

2201. What division?—No. 10, K. Division.

2202. We have sent for you in order to ascertain whether the evidence of William Miller was correct about a certain grave-yard, in Globe-road; state to the Committee what you know about that?—On the 11th October, in the year 1839, information was brought to the station, that a most disgusting scene had been observed by a person from the Eastern Counties Railway; in consequence of that I was directed by my inspector to go down there. On my road I met sergeant Shaw and inspector M'Craw. We went into the burial-ground, and in a kind of pit there were a number of coffins which had apparently been just removed; there were two lads and a man there. I asked one of the lads how that had happened, and he said they had been removed there to make room for more bodies; the ground is getting very full. I observed the lid of one of the coffins partially off; and I said to him, "This is very disgraceful." The coffin was about two feet, it might be, from the surface of the earth. He got down; and it appeared to be the body either of a male or a female; but it was in such a decomposed state I could hardly tell, and the stench arising from it was horrid; I could scarcely breathe afterwards. At that time there was a boy coming out of the burial-ground, and he had a basket with him; the basket contained bones and nails; some of the nails apparently had come from the coffins, from their description; but the bones were not human bones, I should say.

2203. Was he coming out of the churchyard?—Yes; that was when I was going in.

2204. Were these bodies all thrown into one pit?—There were coffins; I saw no bodies.

2205. Mr. *E. Denison.*] What size was this pit?—I should say the pit might be somewhere about 10 feet by 6 feet.

2206. How deep?—We could not see how deep it was, because there was a number of coffins which appeared to have been removed from some other part of the ground.

2207. Was what you saw that the coffins were all brought and put close together, without any earth or anything, and that the coffins were packed as close together as they could be in a pit?—Yes.

2208. That is what you saw?—Yes.

2209. Evidently coffins; some old, and some less old, brought into this pit?—I cannot say whether they were brought; I saw them there.

2210. How many might there be in the pit, do you think?—I should say about four or five, I saw; how many more there might be under it is impossible to say.

2211. *Chairman.*] How near the surface of the ground?—I should say about two feet; or perhaps not quite so much.

2212. You could only see four or five?—No.

2213. You could not tell how deep the pit was?—No.

2214. Lord *Mahon.*] Was that the only pit you saw on the ground?—Yes.

2215. *Chairman.*] Have you ever observed anything else in that grave-yard?—I never observed anything particular; certainly the ground, I should say, from its appearance, is very full, because the greater portion of it is new made ground.

2216. How do you mean new made ground?—I should say there is new earth about two feet from the level of the footpath; that is to give it a greater depth, it having become full. New made earth was brought in, I should say, from somewhere, to make the ground higher.

2217. Is there anything else you wish to state to the Committee?—I am not aware of anything else.

William Shaw, called in; and Examined.

2218. *Chairman.*] WHAT are you?—Sergeant of police.

William Shaw.

2219. What division?—K. division, No. 2.

William Shaw.

21 April 1842.

2220. Will you state to the Committee what has come under your knowledge with regard to the grave-yard in Globe-road?—A circumstance that happened in October 1839. I went with sergeant Parker to the burial-ground in Globe-lane. Some complaint had been made by Mr. Poole, who was a clerk on the Eastern Counties Railway, stating that some coffins had been removed. When I got near the gate, I saw a boy coming out with a basket, and I asked him what he had got, and he said, "Some bones." I took him back into the burial-ground, and opened the basket; there were a number of bones and nails in it; I cannot say they were human bones.

2221. You do not know whether they were or not?—I do not know; I thought they were not at the time.

2222. Have you ever seen, from your own observation, anything disgraceful in that churchyard?—I have not, except on this occasion. Whilst I was talking with the wife of the grave-digger, and telling her how improper it was that whatever bones they were they should be brought out in that way, some of the porters of the railway called out to us that we were standing near the hole where they had been burying the bodies. I turned round to a boy who was there, and asked him what it was; the boy stooped down into the hole and removed a coffin lid; the whole appeared to be full of coffins, and there was no plate or nails on the coffins.

2223. Was the coffin empty?—The body was in the coffin, in the last stage of decomposition.

2224. Colonel *Fox.*] Was it a common coffin, or covered with cloth?—It was not covered with cloth; it was very dirty, and I think the mark of the plate was on it.

2225. Your idea was that it was a coffin that had been mutilated?—My idea was so at the time.

2226. And the nails drawn out?—I should have thought so. The body appeared to me to be that of a male from the size.

2227. Was any part of the dress remaining?—I think not; I knew nothing of coming here until yesterday, so that I am quite unprepared, and I speak merely from memory.

2228. In the course of your service, have you ever had occasion to know, or have you heard of burial-grounds being in an improper state?—From my own knowledge I cannot speak of it; I believe that ground to be very full.

James Anderton, Esq. called in; and Examined.

J. Anderton, Esq.

2229. *Chairman.*] WHAT situation do you hold?—I am a Solicitor, and also a member of the Common Council of the City.

2230. Have you given your attention at all to the state of the churchyards and the grave-yards in the city of London; and knowing what the object of this Committee is, will you have the kindness to state to the Committee what you know upon the subject?—My attention has been drawn to the subject generally; I recollect that my attention was first directed to it in passing through St. Margaret's churchyard.

2231. Lord *Mahon.*] How many years ago are you speaking of?—It is some years ago; my attention was then drawn to it. I went afterwards to Paris, and saw a marked distinction between the burying of the dead in that place and interments in our own country. I observed at that time to a friend who was with me, that if I lived I would endeavour to get rid of the mode of interment of the dead in this country, in order to establish something like the mode pursued there. I should state, with regard to St. Margaret's churchyard, that when I was passing through it a grave was being opened, and there were several skulls and bones thrown out, and putrid flesh. I always considered that the churchyards in this country being made thoroughfares, boys playing at marbles and such things, was quite disgraceful.

2232. Are any of the churchyards in London or Westminster thoroughfares?—St. Margaret's is.

2233. Besides St. Margaret's?—Yes, several; St. Clement Danes; I consider we are there burying within our town streets; I consider it very little better; I consider St. Paul's churchyard also burying in our town streets. I consider that all the churchyards within the city of London are in the same situation. They are most of them very small; they are all of them in very crowded neighbourhoods,

bourhoods, and in the very heart of the city of London, and in the streets. It is very true they are separated from the main streets by iron railings, but that is all that can be said of them.

2234. Have you ever found any bad effects arising from that to the health of the inhabitants?—I cannot say I have myself, but I have heard innumerable complaints, hundreds I may say, of the state of the churchyards, and the effluvium, and the bad effects arising from them to persons residing near them.

2235. *Chairman.*] The disgraceful state of the churchyards?—Yes.

2236. Do you consider St. Paul's churchyard very full?—It always appears to me so. I happened to be present at the time of the funeral of Sir Thomas Lawrence under St. Paul's; I went down, and I was surprised to see that the flag-stone placed on the coffin was not more than four or five inches above the coffin. I consider also that the vaults under the churches are highly objectionable. I have always considered that churches were made for the living, and not for the dead. A short time ago my attention was drawn to the church of St. Martin's, on Ludgate-hill, which is in the very heart of the city. There is no churchyard attached to the church, and therefore they are obliged to put in the vaults not only the paupers, but of course any other inhabitant who may die there. A short time ago the church was under repair, and I saw them carting away bones and decayed coffins, and I inquired about it. They were mixing them up with the rubbish, in order that the passengers might not see what they were doing. I attempted to go down into the vaults, but I was so disgusted that I returned. I know that the attention of the Bishop of London was called to the putting coffins into the vaults without lead. I was speaking of it to the curate of the parish, and he told me he was going to see the bishop on the subject, for that they had no other means of burying.

2237. Then as far as your observation goes, you think that all the parish burial-grounds within the bills of mortality are in a bad state?—I think them a disgrace to the country; I think them a disgrace to civilized society, and a discredit to the country; I think nothing can be worse; and if any gentleman would go round the city and look at the state of the churchyards, the places in which they are situated, and the size of them, (for some of them are very little larger, I think, than this room,) I do not think they would want any other opinions than their own.

2238. Mr. *Kemble.*] Some of those small parishes have very few interments in the course of a year?—Perhaps from five to seven in a year, or from 14 to 20 in a year.

2239. *Chairman.*] With regard to any legislative enactments that might be framed, as you are a man of considerable observation and in the legal profession, perhaps you will state to the Committee what, in your opinion, would be proper legislative enactments?—I should think that the first thing to be done would be to ascertain what has been the emolument of the clergy of the different parishes, taking the aggregate for the last five or seven years, arising from interments, and I think then, that that ought to be made up to them by a rate on the parish, so as not at all to lessen their incomes. It might be a question whether for persons removed from the parish to cemeteries to be buried, something should not be paid to the parish, for registration in the parish, as well as at the cemetery. I think also that, adopting the plan of the Poor Law Unions, parishes might be consolidated in a similar way for the purpose of forming a general burying-ground.

2240. Adopting the plan of the parish unions?—Yes; so that each parish would have to contribute in the same proportion, in the same way as they contribute there.

2241. Having a good deal considered the subject, can you state to the Committee what amount of rate you think would suffice to answer that expenditure?—That would depend a good deal on the nature of the parish; some parishes would be more and some less, in the same way as it is with regard to the contribution to the poor law.

2242. Mr. *Kemble.*] If I understand you, your recommendation would be that the parishes should be formed into unions for the purpose of having a union cemetery?—Just so.

2243. Of course the rate must mainly depend on the price at which the land is purchased for the purpose of a cemetery, and London being so thickly populated as it is, you must go some distance?—Yes; burying-grounds of that description

J. Anderton, Esq.

21 April 1842.

tion would be more applicable to the poor than the rich, for I think the rich now would provide for themselves in the public cemeteries which have been established; the great difficulty is that of burying the poor, and the expense of burying them.

2244. Mr. *E. Denison.*] Can you suggest any means by which that can be got over?—That can only be done, I think, in the way I have suggested, namely, by classifying the parishes on the principle of the Poor Law Unions; because if you take the city of London, for instance, some of the parishes are very small, and perhaps they do not bury more than two or three paupers in a year; I would class them with other parishes.

2245. *Chairman.*] Would you make this union of parishes exactly the same as the pauper unions, or would you leave no discretion to the authorities in each parish to be out of the union, or would you compel them to belong to the union? I do not know that I am prepared to answer that.

2246. Mr. *Kemble.*] Do you not think that to appropriate a burying-ground merely to paupers would be revolting to the feelings of the lower order of the people?—I would not appropriate it exclusively to them, but I think it would be very little used by the other classes of society, who, if they went there, should pay for it.

2247. Mr. *E. Denison.*] You would prohibit the burial of all classes, either rich or poor, in the present churchyards?—Most decidedly, and in churches too, if I could.

2248. Colonel *Fox.*] Do you think there would be any prejudice among the middling and lower classes to a law that there should be a quantity of quick-lime put in the coffin?—I think there would be something revolting to a person standing by and seeing quick-lime thrown on the body of a relation; I think a father or a mother would not like to see quick-lime thrown on a child, and I think a widow would not like to see it thrown on a husband, nor would a husband like to see it thrown on a wife; that would not be my feeling, but I believe it would be the feeling of 19 persons out of 20.

Veneris, 22° die Aprilis, 1842.

MEMBERS PRESENT.

Mr. Ainsworth.	Mr. Kemble.
Mr. Beckett.	Lord Mahon.
Sir William Clay.	Mr. Vernon.
Mr. Cowper.	Mr. R. Yorke.
Mr. E. Denison.	

W. A. MACKINNON, Esq. IN THE CHAIR.

Mr. *John Charles Atkinson*, called in; and Examined.

Mr. *J. C. Atkinson.*

22 April 1842.

2249. *Chairman.*] WHAT is your occupation?—A Surgeon.

2250. Where do you reside?—At Romney-terrace, Westminster.

2251. Will you state to the Committee, so far as your experience goes, your opinion with regard to the expediency of removing interments from large towns?—I have not investigated the subject anything like so far as Mr. Walker, but I have been long convinced of the fact, that were burials to take place without the precincts of the city, it is possible that the health of the metropolis generally would be very much improved, especially during seasons of moisture and rains. I believe at those periods there would be no opinion against that which I am giving now. The attacks of influenza are very much increased when the air is in a state of vitiation, and that result I believe is considerably increased if bodies are interred near to the surface. During the operation of moisture, and the electric action, this gas, which is detrimental to life, would take place in considerable quantities, and would pass out into different localities by that means, and very much deteriorate the health of the inhabitants of that quarter. I was more particularly struck with the fact of the case of William Green, a grave-digger

digger at St. Margaret's, close by the Houses of Parliament. That man, during the early part of May 1840, was engaged in preparing a grave for a person; he had been engaged in the occupation many years, but when he was engaged in thus digging this grave he had penetrated, by means of his pickaxe, a coffin which was close adjoining; he was immediately seized with faintness and lowness; he was observed to fall, and was then removed, for he had shown very little signs of life. He was taken to a public-house, where he had brandy administered to him, and then removed home, when a medical man attended him, who gave him the ordinary stimuli, but with no effect. He continued to grow worse, and the medical man, finding about that period, the third or fourth day after the attack, that he himself was getting very much indisposed, ordered the man to be taken to the Westminster Hospital, where he died two days after his admission. I was called in to attend the medical man; he had symptoms very peculiar, not symptoms that any person in ordinary life would be affected with under a pure atmosphere; he appeared to be affected in a way that I would say nothing could counteract, but that death must inevitably take place, and the effect was as potent, I am sure, as if some deadly poison had been given to him; he continued, although medicines were administered to him at different periods, to grow worse, and died about the fifth or sixth day after the attack. The symptoms, of course, were in some measure dissimilar to those of ordinary typhus, acquired where it is constitutional. They were peculiar, because the attack seemed to be entirely an annihilation of the nervous system. The circulating system went on irregularly and uncontrollably, till death removed the patient. A servant who had attended upon him very closely was also attacked two days prior to his death. She was attacked in a similar way; the pulse precisely in the same condition as that of her master, and she died three or four days after her master. These cases appeared to me to be marked by such symptoms as I considered were not to be accounted for in any of the different diseases with which we are at present acquainted.

2252. Do you consider that all the three deaths you have mentioned were similar in their causes?—The prostrating influence which this poison seemed to have had was the same throughout the whole.

2253. Do you consider that the gas which emanated from that coffin, which the man struck with his pickaxe, was more noxious than the gases usually emanating from coffins from the person having died of any putrid disease, or do you suppose that it was of the ordinary description?—I believe that the effluvium confined within coffins is condensed in proportion to the length of time that the decomposition has been going on, and that in proportion to the intensity so equally is the violence of the action upon the system.

2254. Mr. *Ainsworth.*] How long do you think this coffin could have been in the grave which was broken into?—That would be a question I could not answer.

2255. *Chairman.*] Your impression is, that in proportion as the gas finds a difficulty in escaping, in that proportion, like condensed air, or anything condensed, it becomes more virulent in its effects?—I believe so.

2256. Then, upon that principle, the gas emanating from a leaden coffin by any hole accidentally or purposely made in it, must be more injurious, generally speaking, than the gas emanating from a wooden one, because it is more confined?—That which is confined within a leaden coffin is probably more injurious; that which is escaping gradually, passing through the ground, is less injurious.

2257. The more concentrated it is, the more virulent are its effects?—Yes.

2258. Do you imagine that it was the original gas that occasioned the death of those parties, transmitted from one to the other?—Most certainly; it was the original gas which seemed to have affected the grave-digger, and which affected the rest.

2259. If, instead of being caused by the gas, it had been anything of a contagious distemper, should not you have been liable to take the disease?—Certainly, I was liable; but it is in proportion to the strength of the individual how he is capable of resisting any description of contagious matter. I myself at that period was in very excellent health, and I believe that that circumstance, as well as the exposure that I generally have during the day-time, and a great deal of exercise out of doors, were the reasons in that case of my escaping.

2260. Mr. *Vernon.*] The atmosphere you were breathing in the presence of your patient was probably more diluted and wholesome air than the atmosphere he

Mr. J. C. Atkinson.

22 April 1842.

he was breathing when he was attending upon his patient?—It might be so; but I believe it possible that any person in an infirm state of health by the bedside of that patient might have imbibed it, however attenuated the state of the atmosphere might be, while I might have escaped.

2261. But the chance of escaping increases in proportion as the noxious matter is diluted?—The subject has been spoken of by writers with regard to the effects of contagious matter in the small-pox; we know perfectly well, that even if a person has been inoculated, and he enters into a room which has not been ventilated in any degree, he is liable to a second attack.

2662. Is not the effluvia from a human body more liable to be noxious to a human being than the effluvia from any other animal?—I believe that all animals are the same, with reference to animal substance; I believe the muscles of a dog or of a cat are equal in point of construction, and liable to the same description of decomposition; and if dogs and cats were buried on the surface of the ground, they would be liable to taint the air just as human bodies do.

2263. *Chairman.*] Do you imagine that the carcase of an animal would be as injurious in its effluvium as the body of a man who died of small-pox?—Of course that would be a specific description of disease; I am speaking of the effect of miasma or effluvia generally. I believe all effluvia arising from decomposed animal matter would affect the system in the same way.

2264. Whether the animal itself feeds on vegetable substances or upon animal substances?—I believe that makes no difference; because you find, in the East particularly, that many of the diseases originate from the decomposition of matter from the bodies of the natives who have been cast into the river Hooghly.

2265. Mr. *Vernon.*] Animals do not catch the scarlet fever, nor do human beings catch those diseases peculiar to animals, such as the strangles?—I am not prepared to answer that question, as I have never devoted my attention to animals. It might be that they do not suffer from cutaneous diseases, and they might suffer from other diseases; but I am not prepared to answer.

2266. *Chairman.*] Do you consider that the injurious effects of the gas do not depend entirely upon the state of health of the person affected, but more upon their being concentrated for a certain time?—The more concentrated, the more, I think, the effect would be certain; and the more diluted, of course, it would be less.

2267. Directing your attention to the various vaults under the churches in this town, for example, the churches in the Strand, is it your impression that the gas emanating from the coffins in those vaults, must be injurious to the health of the inhabitants?—I believe if the gases escape, they tend materially to affect the health of the inhabitants, perhaps not immediately, for a person might imbibe the impure air, and, after a week or two, suffer the effects of it; and it is more at particular seasons, especially on the approach of the rainy season. Of late you will find that influenza has hardly ever left this country from the year 1833, and it has attacked individuals even two or three times in the course of a year; and I believe those attacks would not be anything like so severe, were those individuals in a purer atmosphere. I believe the grave-yards are, in a great measure, calculated to deteriorate the state of the atmosphere.

2268. Therefore they increase the epidemic?—Certainly.

2269. Lord *Mahon.*] Do you mean that the complaint, known by the name of influenza, was never known in this country previously to the year 1833?—It has been known 50 or 60 years before, but, according to medical authorities, I do not believe the attacks had been so frequent as of late years.

2270. Upon what ground do you fix the precise year 1833?—Because it has been universally observed, that there were peculiar symptoms characterising it at that period, and from that year those symptoms have more or less been acting upon individuals labouring under that disease.

2271. *Chairman.*] Then it is your impression that it is most injurious to have those gases mixing with the air?—Most assuredly.

2272. You have not directed your attention to ascertain to what extent they may be injurious when mixed with the air?—I have not made any experiments with regard to the gas. It is an experiment that I should be loth to undertake.

2273. Their injurious effects depend much upon the state of body of the person who may inhale them, and the various causes which may produce epidemics in general; but your impression is, that they tend to perpetuate epidemics

and

and to increase them?—Yes, and then attacks are necessarily made longer. If the air were perfectly pure, I believe, that under an attack of any disease we stand a better chance of recovery.

2274. Is that the reason by which you account for a change of air being so beneficial in those complaints?—Certainly, the change of air is merely to a purer atmosphere.

2275. Do you imagine that the health of this metropolis would be improved, and that fewer deaths would take place, if you were to remove the grave-yards from its precincts?—Most assuredly, I should say so.

2276. To a considerable extent?—To a considerable extent. I believe that at the present time if we had not been provided with a cheap mode by which persons can be taken in and out of London by omnibuses, railroads, and steamers, if we either had not that advantage, or if it was expensive, I consider that the amount of deaths would be increased, two or three fold.

2277. Mr. *Yorke.*] What do you say as to the time when there were no steamers?—At that time the population of London was nothing like so great; the deaths, in proportion, were less; the houses were not built so lofty, and the ventilation was purer.

2278. Lord *Mahon.*] Do you mean to say that the houses were not so lofty as at present, at the time when steam-boats were introduced?—No; that I do not mean to say, but I mean in former times. I am not speaking of a period within 50 or 100 years.

2279. You are aware that steam-boats have been introduced within 50 years?—Yes, but we have not the statistics of that period particularly.

2280. Mr. *Ainsworth.*] You mean to say that as London has been completely built up, there is less circulation of air, and that consequently, unless the inhabitants went more out of town and breathed a purer air, it would be more fatal to the health of the metropolis?—I have very little doubt of it; I have myself gone out of London with a tongue perfectly coated, and I had hardly been five miles out of it when the tongue has absolutely got clear by the atmosphere alone. If a person continue under a depressing atmosphere for a series of weeks and months, and the power of absorption cannot go on, on account of this coating, I believe the consequences would be very serious.

2281. Lord *Mahon.*] Might not the beneficial change in your health when you found yourself five or ten miles out of town, be ascribed to the exercise which took you five or ten miles out of London?—No, the exercise was incapable of doing it in London; it is the air which acts, and that alone.

2282. *Chairman.*] In proportion as fine clear pure air is beneficial to the human frame, in the same proportion is bad foul fœtid air, mixed up with gas, injurious?—Certainly.

2283. Mr. *Yorke.*] You spoke of three individuals who died; can you undertake to say that they died from the same disease, whatever that disease was?—The same disease, or infection of any kind, will not produce exactly the same symptoms in different individuals; for instance, I have observed that matter introduced into the system, even solid matter, without making it into a gaseous product, would not produce the same symptoms in all. The great characteristic symptom was, that the heart was disordered by it, and it is upon that, that I more particularly wish to dwell; and therefore I should say, without the slightest doubt, that the whole of them died from the same cause.

2284. *Chairman.*] Are you aware of any similar occurrence taking place, to what you have already mentioned in St. Margaret's churchyard, in any other churchyard in the metropolis?—I have heard of a case in which two deaths occurred from the opening of a grave in Aldgate churchyard.

2285. What were the particulars of those two cases?—To the best of my knowledge, for it is now two years since I read the account, and before the case I have mentioned now was known, I believe two deaths ensued in consequence of the effluvia arising from the dead bodies placed in and near a deep pit for the interment of the poor; that, I believe, was the fact, so far as I can remember.

2286. The instances you have mentioned were such, that the individuals suffered directly from the operation of the gas; but it may act indirectly in a thousand different ways, may it not, upon the human frame, and produce diseases which, perhaps, in the first instance, are not attributed to that gas?—Certainly; that is quite true.

Mr. *J. C. Atkinson.*

22 April 1842.

2287. At what distance would you say it would be perfectly safe to the health of the inhabitants to have the grave-yards; from what distance of inhabited houses would you conceive that the site of a burial ground should be?—I would not have any burial-ground within half a mile of the metropolis.

2288. You think half a mile distance is quite sufficient to prevent the possibility of any injury arising?—If we take into account the winds which prevail, you will find that near and about the metropolis, south-westerly winds generally prevail, at least seven months out of the 12, and in consequence, I should be inclined to place the burial-grounds in a situation and in a direction by which the metropolis would not be affected by the effluvia which would be rising from the graves; in that way I believe the inhabitants of the capital would be protected to a much greater extent.

2289. Lord *Mahon.*] When you say "half a mile from the metropolis," do you mean half a mile from the last building?—Exactly so; half a mile at least from any inhabited quarter.

2290. Extending your remark to any long line of suburbs?—Yes.

2291. Mr. *Ainsworth.*] Whereabouts would you think it advisable to place the burial-ground in the neighbourhood of London. Would you place it in the north?—I should place it in the north-east; the winds blow generally from south-west; but this is a matter of individual opinion.

2292. Do not you think there is a great deal of east wind in the spring?—Of late years we have had it, and I believe the last year or two we have had a continuation of it for a much longer period than may be calculated upon, even referring back for many years to the meteorological tables.

Mr. *George Dorkin Lane*, called in; and Examined.

Mr. *G. D. Lane.*

2293. *Chairman.*] WHAT is your profession?—I am a member of the Royal College of Surgeons, and a licentiate of the Society of Apothecaries.

2294. Where do you reside?—In Wilson-street, Drury-lane.

2295. You are aware of the object of this investigation. Will you state, generally, to the Committee, your sentiments with regard to the healthiness or unhealthiness of interring in large towns?—I have been residing in the neighbourhood where I am upwards of 17 years, abutting on the burial-ground in Drury-lane; and I attended a case not six weeks ago, a servant to Mr. F———, a linendraper in Little Russell-street. It was a young girl who had just come up from Wales, and was affected with violent pain in the forehead, giddiness of the head, sickness of the stomach, and general pains in her limbs. She slept in the back attic; the back of the house opened upon the burial-ground; this house forms the corner where there are two houses forming the angle, so that the effluvium is shut in this corner, where it ascends, and there is no doubt the girl was affected by the effluvia from the burial-ground.

2296. Where is the burial-ground?—In Drury-lane; St. Martin's burial-ground in Drury-lane; I have no doubt that this girl was affected by the effluvia from that burial-ground; she had good health when she came from the country; she was ill a fortnight, and I had some difficulty in managing the case. She is now well.

2297. And you have no doubt that her illness arose from those effluvia?—None. The back of the house is in a corner, close by it; I have often myself perceived the effluvia, and often tasted it in the summer season; and I have often taken lodgings at Brompton, when I was ill, when the indisposition could not be attributed to any cause but fatigue, and the atmosphere in which I am living, and the people I was attending.

2298. Have any other circumstances of a similar nature come under your notice?—The neighbourhood is very low, and the people about there are extremely dirty; gentlemen who live in the country leave the houses to people in the town to let them out for them; those houses are never whitewashed or cleaned for years, the stairs are broken, and the panes of glass in the windows are knocked out, so that if you are called to a house in the night, the rain pelts upon you as you go up stairs. People who sell oysters, and fish, and those things live in those places, and they throw their oyster shells and their fish guts in the yard, till you see two or three cart loads piled up.

2299. Then, in some measure, the unhealthiness may arise from the dirt?—Yes, I would not confine it to the burial-ground; it is of little use to remove the burial-

burial-grounds unless you make them clean out the houses. It is not only the poor people that sell those things who live there, but each of the apartments are let out to one or two girls, and they have their men, many of whom are thieves; they have fights sometimes, and then I am called in, and I have a great deal to do among those unfortunates, for which there is no return.

2300. Will you confine your attention chiefly to the subject of this investigation, which is how far the health of your immediate neighbourhood is affected by the miasma arising from the burial-ground?—I have stated one case that happened the other day; I am satisfied that the people generally suffer from it more than they are conscious of; I was at the burial of a friend about six weeks ago in Saint Giles's churchyard; the corpse was not in the ground more than three feet down; the clergyman who officiated was a sensible man; he was as far off as that window, so far that there being a little wind up, you could not well hear him, and he got partly under the lee of the church; but there was a very strong effluvia from the grave; I tasted it, and when I saw him keeping so far off that I could scarcely hear him, I thought he was a sensible man, but out of respect to my friend, I stood near, and I bore it; I would not leave my post out of respect to the deceased, but if I could have been alongside the clergyman I should have been glad of it.

2301. Did you experience any ill effect?—It was very unpleasant to swallow the effluvia.

2302. Then you consider it to be unhealthy?—I am sure of it; when I go into a room where there is fever, not being in strong health, if I am there five or ten minutes, I feel a depression and a loss of power in the knees, and I am obliged to hold by the stairs as I go down. When I say that I have tasted it, the effluvia was so strong that you could not be insensible to it, for the atmosphere was strongly impregnated with human decomposition; that is what I tasted, and that is pernicious; if we were kept there all day in that sort of atmosphere we should be ill, no doubt of it.

2303. Do you consider that that effluvium rising up in the atmosphere of this town is likely to generate complaints?—It will generate low fevers.

2304. Lord *Mahon.*] In the course of your professional practice, have you found numerous cases in which you considered the vicinity of grave-yards, and the effluvia from them, to be either the sole or one of the principal causes of the illness?—I think it is only people who live as near as I did to a grave-yard that feel ill from it, and even then you get used to it. People who are continually exposed to nasty effluvia can bear it better than other people. I have caught typhus fever and scarlet fever by attending on people that were ill, and it has nearly killed me. If bodies dying in a state of disease are buried near the surface, and then pulled up again in two or three weeks, it must have a pernicious influence, more than if they were deeply interred, and kept in the ground a proper time.

2305. Do you consider the practice of keeping open the graves injurious to the health of the inhabitants?—Certainly; and the practice of opening them frequently.

2306. Mr. *Cowper.*] Have you observed that the inhabitants of houses within the vicinity of a churchyard are more unhealthy than the inhabitants of other houses?—I have had a great deal of practice in those courts for 17 years, and there is a great deal of illness there; the back of Crown-court incloses the burial-ground.

2307. You cannot trace the illness of those persons directly to the grave-yard?—No; but those diseases are generally of a low character.

2308. Lord *Mahon.*] Do you consider the vicinity of the grave-yard as one main cause of the illness?—It is a main cause of illness; I have stated the case of the girl who came from Wales, where it was a place shut in, and the effluvia ascends.

2309. Mr. *Yorke.*] Can you undertake to say that persons living in the immediate neighbourhood of a grave-yard are more frequently ill than persons living at a distance?—No, I have not been able to make that observation.

2310. *Chairman.*] You have sunk areas round that grave-yard, have not you?—Yes, there are, and you cannot pump the water off. The water gets up in the kitchens, and floats them, and that is adjoining the burial-ground.

2311. Water from the grave-yard?—Yes; I have had that in the cellar of my own house.

Mr. *G. D. Lane.*

22 April 1842.

2312. The water must be very injurious to health?—Very offensive; black, like the bilge water of a ship, from the burial-ground, and the drains of those houses altogether.

2313. At what distance from inhabited houses would you say that the grave-yards would be innoxious to the population?—I cannot state the precise distance. There are several places built about town, which are princely, and I do not see why the poor of the parish should not be buried at those distances as well as those that can afford to pay.

2314. Would there not be great additional expense?—It might be done by contract. The city of London has a farm-house for its poor; the men are sent out to Peckham, and different parishes, and they have their children out as far as Norwood, and they take excellent care of them; and in the same way in burying the dead, they might as easily bury them out of town. But in St. Giles's, if a person dies in the workhouse, it is no distance to make the paupers carry them to St. Giles's and bury them there; and the same at St. Martin's, they send their poor to this burial-ground in Drury-lane.

2315. Are not the relatives of the person of the deceased generally very anxious to follow him to his last home, and would not it be annoying to their feelings if the person was buried at a distance; how could they follow him?—Very few people who die in the workhouse are buried in that way; you see the paupers carrying them.

2316. Would not the relatives of a poor man who is taken out some distance from the parish feel a difficulty in following him to his last home, and would not they feel annoyance at being prevented from so doing?—Certainly; there might be cases here and there where friends would like to follow the deceased, but if they are buried at that distance, it might still be done; the expense would be nothing in that respect.

2317. Have you at all attended to the general effect of this putrid gas?—No.

2318. Have you attempted to analyze it?—No.

2319. Do you consider that the gas emanating from the human body is more injurious or less so than that of an animal?—I consider that gas from a human being dying under disease, is more pernicious than of animals, who do not generally die from disease; if a horse is suffering from disease, you kill it at once; but we have the most horrible diseases, under which we labour till we die under the disease, and in that way it must be more pernicious.

2320. Do you think that adds to the injurious effects of the effluvia?—No doubt.

2321. A former witness has expressed an opinion that the effluvium might be injurious in proportion to its density or concentration, but you think that independently of that, there is a difference between the effluvia arising from a human being who is buried, and the dead body of an animal?—Yes, the difference between a man who dies of disease, and an animal who does not.

2322. Mr. *Vernon.*] The effluvium is imbibed through the mucous membrane of the stomach, as well as inhaled into the lungs?—It is imbibed in that way.

2323. It may descend through the saliva into the stomach, or it may be inhaled through the mouth or the nose into the lungs?—Yes; the great mischief is, by its being inhaled into the lungs, and thus entering into the circulation.

2324. *Chairman.*] May it not be absorbed by the pores of the skin?—More likely by the air you breathe it in, and it goes down and enters into the circulation immediately.

2325. Mr. *Yorke.*] Do you happen to know, in your parish, which is a populous parish, whether, when the poor die, it does or does not happen that several bodies are buried at the same time; in other words, that the bodies of deceased persons are kept waiting until there are a certain number to be buried at specific times appointed by the clergyman?—I have never known the clergyman to interfere in a case of that kind; but I have known instances where one person has died in a house, and another has been dying, and they have stopped till the second has died; so that one has been dead near a fortnight in the house, and the other only a few days, and then they have been buried together.

2326. Mr. *Ainsworth.*] Would you think it desirable to have a compulsory law to require the burial of the dead at a stated period after the decease?—I do; there could not be a greater kindness to society than that.

2327. Mr. *Yorke.*] You say that you have known a body to be kept as long as a fortnight

Mr. G. D. Lane.

22 April 1842.

a fortnight in a house, where another person was seriously ill, in order that the two bodies should be interred together?—Yes, I have.

2328. Mr. *Vernon.*] In the event of a person being affected by that species of illness which is consequent upon this effluvia, is it a prudent thing to drink spirituous liquors as a remedy?—It excites the stomach, it produces thirst and dryness of the mouth, and they naturally look for something to rinse their mouth.

2329. Is it a prudent thing to indulge in the use of spirituous liquor as a remedy?—No; it would be more prudent to drink water, but beer is at hand.

2330. Would you give them sal volatile upon such an occasion as that?—Yes, I would give a stimulant when labouring under its influence.

2331. A stimulant, but not spirituous liquor?—I do not see why spirituous liquor would not answer the purpose.

2332. Mr. *Cowper.*] Do you mean that water, or spirituous liquor, would be the best?—Water would carry off the taste of the effluvia, and clear the stomach as well as spirituous liquor; but it will not give a stimulus and enable the man to go on with the work.

2333. What would you recommend to a person suffering under the effluvia of a grave?—There is a man suffering effluvia; a medical man is called in to treat him. The man is knocked down by a dose of poison; he is a grave-digger, at work, and the effluvia gets down his throat, and he has recourse to spirits. That man would not be satisfied with water while he is at work. When the labour is over that would answer, but when they are obliged to keep at this sort of work, having dose after dose; when they feel themselves ill with the effluvia they must have a stimulant; but it entirely depends upon the duration of the work, whether a glass of water would answer the purpose, or whether they must have a stimulant.

2334. Mr. *Vernon.*] To enable them to continue their work, they must have recourse to spirits; but the evil is further increased by the continuance of the work and the use of spirits together?—By taking the spirits in excess, and the nature of their work.

2335. *Chairman.*] Is the effect of the miasma to lower the pulse?—It quickens the pulse, but it makes it small and weak.

2336. Do you consider the practice, which is so prevalent in this country, of keeping bodies a considerable number of days before they are interred, injurious to public health?—Very injurious.

2337. From what circumstance?—The generality of bodies die from disease; many of the diseases are catching, and they will infect those about them; and keeping such bodies in a house, sometimes in a room, with half a dozen living in the same apartment, it cannot but be pernicious. I was in a room the other day where 13 people were with a corpse in it, and that corpse was there for some days.

2338. Is it your impression, that the gases emanating from the vaults underneath the churches in the Strand, or in any other part of London, must be injurious to the health of the people?—I am quite satisfied it is.

2339. Although a man may escape, from being in a strong state of health, yet, upon the whole, you think the effect of the gases mixing with the atmospheric air is most injurious?—It is depressing. The grave-diggers are depressed over their work, and they carry off their depression by drink. If they could drink water, it is refreshing and cleansing and sweetening to the mouth; but they want something to keep up their spirits. It is their habit, and they must have it, and they look for it naturally.

2340. Do you consider that inhaling this gas is very depressing to the spirits?—It is depressing to the bodily powers more than the mind.

William Chamberlain, called in; and Examined.

Wm. Chamberlain.

2341. WHERE do you live?—26, Great Wyld-street, Lincoln's-Inn-fields.

2342. Are you at all connected with the cemetery companies around the metropolis?—No.

2343. Will you state to the Committee what has come under your observation with regard to the state of the churchyards?—In the year 1831 I was first employed by Mr. Watkins, the head grave-digger of St. Clement's churchyard; from that time till the year 1838 I never opened a grave without coming into other coffins of children, grown persons, and what we term odd sizes, which we have

Wm. Chamberlain.

22 April 1842.

been obliged to cut away, to cut through those coffins, the ground being so excessively full that we could not make a grave without doing it; it was done by the orders of Mr. Watkins, and Mr. Fitch, the sexton of the parish, that those coffins should be chopped up, and the wood placed against the walls and the palings of the ground. We have come to bodies quite perfect, and we have cut part away with choppers and pickaxes. We have opened the lids of the coffins, and the bodies have been so perfect that we could distinguish males from females, and all of those have been chopped and cut up. The ground has been my destruction and my ruin, through the stenches, and the dampness, and the work I have undergone; since I have been at the work, I have lost the use of my limbs; I have been in the hospitals, and not able to move a limb; I have come out upon crutches; I have been in Middlesex Hospital, and St. George's Hospital next; I have been in King's College Hospital since. During that time I was at this work, the flesh has been cut up in pieces and thrown up behind the boards which are placed to keep the ground up where the mourners are standing; the four corners of the board support the platform for the mourners to stand upon, and when the mourners are gone, this flesh has been thrown in and jammed down, and the coffins have been taken away and burnt; I myself have burnt some of them.

2344. You say that you could not open any grave without coming to these coffins?—Not one single grave, not even at three feet from the surface, without coming upon coffins. I filled up one side, all along the houses in Clement's-lane, during my time; and along by the palings, in the middle of the ground, was so full that we could not get a grave without coming round the sides. During my time, I can, with positive facts, say that above a thousand has been cut away.

2345. If they were quite fresh, what did you do with the bodies?—They have been cut up in pieces. The strings, what we term the leaders of the knees and the joints, have been so tough and so strong that we have been obliged to chop them away with a sharp instrument, a hatchet, and the coffin wood we have been obliged to saw in different parts of it, unless we came to a nail, and then we beat it away with a sledge hammer. The skulls and bones, there have been holes dug for them, and they have been placed in those holes and beat up just as you would crack nuts, and the marrow bones the same, and buried.

2346. Have you often come to coffins of people who have lately been interred?—Yes; we could not dig a grave without coming upon coffins that have not been buried 12 months, and some not six months. I was very sorry that ever I was out of a situation, to be compelled to go to such work, but I did it for the sake of my wife and family.

2347. Were you in good health before you began this work?—Yes, I never had a day's illness; but since that I have never had one day free from pain.

2348. Mr. *Cowper.*] How long did you work there before you were taken ill?—I worked there between five and six years before I was taken ill; I was once taken; I got up one Sunday morning and went into the ground in Portugal-street; we had a grave to open; I believe it was 10 feet; I went in and completed the work, and I cut four or five coffins through in that piece of ground, and the bodies of some; I placed the flesh behind, and I went home to my breakfast; it was our church time; we did not dare do any more till the people were in church, for the sound of cutting away the wood was so terrible that mobs used to be round the railings and looking; we could not throw a piece of wood or a piece of a body up without being seen; the people actually cried "shame," out of the windows at the backs of the houses on account of it.

2349. *Chairman.*] Had you any particular tools for chopping up these bodies?—Yes, a hatchet and a saw and a pickaxe.

2350. Did not you find it hard work to cut through a solid coffin?—Very hard; I have been an hour and a half or two hours over them, breaking the lead and taking the sides of the coffins up, and I have spoken to the head gravedigger about it, and said, "We shall never get this grave done on account of this wood; the wood is so fresh that you cannot move it;" not even the cloth hardly soiled, or the nails rusted.

2351. How many coffins have you dug through, and bodies cut through, to get a depth of 10 feet?—To get 10 feet of ground you must cut through at least five or six; in the almshouses I could uncover, at least, and expose a dozen coffins within one hour.

Wm. Chamberlain.

22 April 1842.

2352. Mr. *Yorke.*] How long is it since you first took to this vocation?—In the year 1831 was my first commencement; but before that I was a single man, and was in the workhouse; I was then an inmate of the house, and the head grave-digger used to have the privilege of fetching in any man if he wanted any assistance, and by that means I had been called upon several times to assist in digging these graves before that.

2353. You are not in the workhouse now?—No; my children are there, but my wife and I are out.

2354. Have you given up this occupation in consequence of its injury to your health?—Yes; it was in the year 1836, in April, that I was first seized, and laid upon my bed; and I lay there six weeks, without knowing what was the matter with me; then I was taken to a hospital in a cab; I was taken first to Bartholomew's Hospital.

2355. *Chairman.*] Did not you feel a degree of compunction when you first began cutting through those bodies which had just been interred?—Yes; I felt very timid, and a great dread of doing so; but having nothing else to do, I did not know what to do.

2356. Under whose orders did you do it?—Mr. Fitch and Mr. Watkins's orders. Mr. Fitch is the sexton, and Mr. Watkins is the man that employed me first; I have heard Mr. Watkins say to Mr. Fitch, "Sir," says he, "What shall we do with this?" I have heard him swear, and say, "You must do it; you must remove this wood away."

2357. Do you repeat the statement, that it is impossible for you to make a grave in that grave-yard now without cutting through the bodies?—Without cutting through the bodies, and many of them perfectly fresh, you cannot get even three feet of grave, nor yet two.

2358. How near is the wood of the coffins to the surface?—There are coffins now within a foot of the surface.

2359. Mr. *Yorke.*] Can you not go so deep as three feet without finding a coffin?—No, you cannot, without moving children, or something; the children have been taken out and placed in a grave that is not above a foot and a half deep. Those bodies have been buried on the Sunday before, and then there has been a grave ordered, and those children have been taken out, and if they could not find a grave sufficiently deep just to cover the coffin, a child has been taken out, and the coffin broken up, and the flesh buried. The child has been buried on a Sunday, and then the child has been moved and turned out of the coffin, and sometimes they have been placed nowhere; I have done it by orders.

2360. How soon after the Sunday?—I have taken children up and moved them within a week after they were buried, and placed them in a different part of the ground, not above six or eight inches under ground.

2361. Sometimes you say you have placed them nowhere?—I have done away with them.

2362. What do you mean by "doing away with them"?—Breaking the coffins up, and cutting the flesh in bits, and burying it.

2363. This is done with the perfect cognizance and approbation of the sexton?—Yes.

2364. In fact, by his order and instruction?—Yes, I have heard him order it. There are instruments kept for the purpose of cutting away coffins; a chopper and a saw. There is no use for those in regard of digging a grave in the middle of the ground.

2365. Do you suppose that there is no place in that burial-ground in which it would be possible to find a place where three feet of depth could be given to a body about to be interred, without interfering with coffins?—There is not, except it is in family graves.

2366. Have you ever been there late at night?—Yes.

2367. Are you ever sensible of any unpleasant smell?—There has been a dreadful sensation of smell, and likewise my clothes and things, when I have gone home; and I have been obliged to put them out upon the landing all night; I could not bear them in the room. I have not been able to bear myself after I have gone home.

2368. You said that you began this occupation in 1831?—Yes.

2369. But that in 1836 you became ill?—Yes.

2370. How long were you ill?—I have been ill now going on for six years.

Wm. Chamberlain.

22 April 1842.

2371. Do you date your illness from 1836?—From 1836. I have never been free from pain during that time.

2372. After you were first taken ill and sent to the hospital, did you, upon your recovery, return to this occupation?—No, I was unfit for it; they would have been glad for me to have come, because they said there was not a better grave-digger in London than I was, for expedition and getting the things according to order.

2373. But with all that they said to you, you still refused, because you felt that your illness was the consequence of your occupation, and that if you returned to your occupation you would probably be ill again?—I may say it would have caused my death if I had kept on with it.

2374. How many hours in the day were you usually occupied?—Sometimes we have been there the whole of the day; sometimes I have not been an hour; sometimes I have been two and three.

2375. When you had a great deal to do, what was the earliest period of the day at which you began?—At five o'clock in the morning.

2376. And the latest period of the night at which you finished?—The latest period of the night has been at ten o'clock at night.

2377. Have you ever worked from five to ten?—Not the whole of the time; part of the time I have.

2378. About how many consecutive hours at most have you worked?—I have worked at least six hours, keeping on without stopping.

2379. That was only occasionally?—That was only occasionally; upon deep graves, and things that were in a hurry.

2380. What do you think, taking one day with another, was the average period of time that you passed in the grave-yard at work?—Taking one day with another, I cannot say more than three hours a day.

2381. Did you drink much when there?—I was compelled by the head grave-digger; he used to take me out sometimes and give me a pennyworth, and indeed I was obliged now and then to get a pennyworth, and sometimes at night I have gone home intoxicated.

2382. Do you like drink?—No, I do not; and I never was a regular drunkard till I took to this business.

2383. And you have almost made yourself a drunkard by force in attending to the business?—Yes, by force; the stench, and the work I had to do, caused me to get the drink.

2384. Did you, when you took the drink, imagine that you were relieved?—Yes, I was relieved for the time, but the stench and the work that I had to go to actually took the strength of the drink from me; and sometimes I went to refresh myself again with fresh drink, the ground was so strong. The ground is a complete body of putrefaction.

2385. After you became positively ill, so ill as to be unable to work, had you any symptoms gradually coming on?—It first came on in my feet.

2386. What came on?—Violent pain through the dampness of the ground, and in my knees from kneeling on the wet coffins; open coffins, which have been full of water and of pieces of flesh; and we have had to bucket this water and pieces of flesh, and we made holes in the ground and poured it out.

2387. Do not you think the illness in your knees might be consequent upon the wet of the damp coffins, not the effluvia?—Yes, that is partly the occasion of it.

2388. In what other part of your body were you affected?—In my arms and hands.

2389. What was the nature of the attack?—It is called the rheumatic gout.

2390. Is the illness under which you labour distinctly rheumatic gout?—I have heard the gentlemen in the hospital call it rheumatic gout.

2391. Did they state to you from what cause it arose?—They have asked me what occupation I have been under, and I have told them, and they have told me that it has been occasioned through the dampness of the ground and the work I had done, which has brought it on. They asked me if ever I was a drunkard; I told them never. They asked me if ever I was troubled with other complaints; I was never troubled with any complaints before I was seized with this. They asked me if I was a married man; I told them I was a married man. I never had anything the matter with me before, neither me nor my wife, till now; lately my wife has been afflicted with the same complaint.

2392. Your

Wm. Chamberlain.

22 April 1842.

2392. Your wife is now afflicted with the same complaint that you have?—Yes; the doctors told one another that they termed this complaint to be catching.

2393. Does the sexton derive any emolument from the interments?—Yes.

2394. Do you know what those emoluments are?—In the first place he receives his own fee upon each interment; then again he stops 6*d.* out of the first digging; and then he stops 6*d.* out of each foot after the first digging; the regular money is 18*d.* a foot, and he gives 6*d.*, and that allows the head grave-digger 1*s.*; and I never received myself more than 4*d.* a foot after the first digging.

2395. You were second grave-digger?—Yes.

2396. And that is why you received 4*d.*?—That is why I received only 4*d.*, but it was ordered by the churchwardens.

2397. It is then a fact that the sexton is interested in the burying of as many bodies as possible in the churchyard?—Yes, he is; the more bodies he can bury, the more it is to his profit.

2398. But the churchwardens have no advantage from it?—No advantage at all.

2399. But is not it the duty of the sexton to communicate with the churchwardens as to every interment?—I believe they do, so far as I know; but I cannot say whether they do or not: but I believe they have to make their books up, and to show them to the churchwardens.

2400. Is it or is it not the duty of the sexton to communicate to the churchwardens as to what is the state of the burial-ground?—Yes, it is his duty to do so.

2401. Do you believe the sexton was in the habit of doing so?—I cannot say that he was in the habit of doing so; I know that there have been many still-borns, and that like, which has never been entered in the books, and which he has buried, and received the money for them.

2402. Have they been buried with the Church service performed over them?—No, the still-borns have not; they have been put in after the mourners have gone, in other funerals; they have been put in on the tops of other coffins, and at the heads and feet.

2403. Was the tool with which you were in the habit of cutting up coffins a common ordinary tool, or one made for the special purpose?—It was a tool which was brought into the ground; whether it was made for that purpose I cannot say, but it was brought into the ground for the purpose, and the saw likewise.

2404. Had you any especial means of sharpening it?—Yes; the head grave-digger used to take it to get it sharpened often.

2405. From your frequent use of it, it was frequently necessary to have it sharpened?—Yes; sometimes we would have as many as 8 or 10 coffins to cut away at a time.

Lunæ, 25° *die Aprilis*, 1842.

MEMBERS PRESENT.

Mr. Ainsworth.	Sir R. H. Inglis.
Mr. Beckett.	Lord Mahon.
Hon. W. Cowper.	Mr. Redhead Yorke.
Colonel Fox.	

W. A. MACKINNON, Esq. IN THE CHAIR.

Dr. *Robert Bentley Todd*, called in; and Examined.

Dr. R. B. Todd.

25 April 1842.

2406. Sir *R. H. Inglis.*] YOU are a Fellow of the College of Physicians?—Yes, and of the Royal Society.

2407. Are you cognizant of the evidence which has been taken before this Committee in reference to the burial-ground adjoining King's College Hospital, in Portugal-street?—I cannot undertake to say I know the whole of the evidence; I have seen part of it.

Dr. *R. B. Todd.*

25 April 1842.

2408. Are you prepared to state to the Committee, that any allegations which may have been made as to the inconvenience to the health of the patients in King's College Hospital, from the vicinity of the grave-yard in question, are accurately stated or not?—I can state to the Committee that no inconvenience whatever has been felt from the contiguity of the grave-yard.

2409. By the words, "No inconvenience," do you wish the Committee to understand no sensible inconvenience to the health of the patients within the hospital?—Precisely so.

2410. Have you reason to think that any disease has originated, or has been aggravated within that hospital in consequence of the contiguity of the grave-yard in question?—I am quite certain that nothing of the kind has happened. That hospital is remarkably free from fever. I obtained a statement from the secretary as regards the number of cases of fever; and it appears that out of 2,369 in-patients who had been admitted into the hospital since the 15th of April 1840, there have been only 70 cases of fever. Not one of these cases, I can positively state, of my own knowledge, originated in the hospital.

2411. They were all cases of patients brought into the hospital?—Yes, brought into the hospital from other places, and in no case has the disease been communicated to another inmate. This is remarkably the case as regards the officers resident in the hospital. We have two medical officers resident in the hospital, besides the dispenser. The dispenser has nothing to do with the patients. The two resident medical officers are continually in the wards attending to the patients. Not one of our medical officers has, during the last two years, experienced fever, and (although I cannot speak so positively on that subject), I do not believe that any one of our pupils, there being a good many who attend, has caught fever during the last two years.

2412. You have stated that no case has originated within the hospital; are you able to state to the Committee, as the result of your own professional experience, that no case of fever has been aggravated, so far as you can trace the result, by the contiguity of the grave-yard and the effluvium thence arising?—I feel quite satisfied that no case has been aggravated from its being in that hospital; it is remarkably well ventilated.

2413. It has been stated to this Committee that the exhalation of the effluvium from grave-yards furnishes one of the most powerful causes of disease and mortality in this metropolis. As a medical practitioner, and a physician, of considerable experience, are you able to state to the Committee any opinion upon that subject?—I think that some rather erroneous opinions have been put forward on that question.

2414. Mr. *Ainsworth.*] Do you allude to the evidence which has been given before this Committee?—I do not wish to comment on he evidence whichhas been given here; I allude to statements in the public papers. The state of the case appears to be this: when a great number of bodies are collected together in a burial-ground undergoing decomposition, if graves are being frequently opened, there must be a considerable escape of gases; when these are brought in a concentrated form to act on the human system, they are productive of very serious results. The gases that are generated in grave-yards are generally sulphuretted hydrogen and carburetted hydrogen with ammonia. If these gases be generated in the laboratory of the chemist, and brought to act on the animal frame, they will produce the same effects. These effects are very different from the ordinary symptoms of typhoid fever. As to typhoid fever, I think it will be found that the great majority of medical men, who have turned their attention to the subject, will agree in saying, that typhoid fever is propagated by a poison which is generated in the living body, and not in the dead body.

2415. Lord *Mahon.*] Is there a distinction between typhoid fever and typhus fever?—The same terms are used very much synonymously; some writers do make a distinction; typhoid fever is generally a milder form of typhus fever.

2416. You use those terms pretty nearly as synonymous?—When I use the term typhoid fever, I mean typhus fever, either the more severe form or the milder form; they are both propagated in the same way.

2417. Sir *R. H. Inglis.*] Do you believe there is a specific disease in the human frame traceable to the exhalation of the effluvium from animal matter decomposed?—I think I can scarcely say there is a specific disease; there are certain peculiar symptoms produced from the exhalation of gas, when brought to act on the system in a concentrated form.

2418. Do you believe that that disease or the typhus fever with those additional symptoms may be communicated by a party suffering to a party in health, whether by contagion or inhalation?—I think the typhus fever may be communicated, but I do not think that the symptoms that are produced by the influence of the gases can be communicated.

2419. Then if it be stated that the original introduction of this deleterious gas into the human frame in one subject caused disease in another, and in the medical man who attended the second, you do not think that such opinion is founded on an accurate survey of the facts, so far as your own experience would enable you to judge?—Certainly not.

2420. *Chairman.*] Have you turned your attention particularly to the evidence which we have had or to the statements in the papers?—I have read some letters which have been published in the papers, and I have read the evidence contained in a Report of a Committee on Health in Towns, which sat, I think, about two years ago.

2421. As we are not aware exactly what you have read, will you have the kindness to state to the Committee what it is you allude to that you have read, or that you understand?—What I have gathered from what I have read, has been this; it has been put forward (I have thought rather too prominently,) that the exhalations from grave-yards are the cause of typhus fever. Now to that I object; typhus fever I believe to be propagated from a poison generated in the human body, in the living body, which is communicated by immediate contact with, or close contiguity to, the parties affected, or by communication with their clothes or any ordinary articles of clothing or covering that may have come in contact with the bodies of the diseased.

2422. As a medical man, is it your impression that the gases to which you have already alluded, emanating from putrid animal matter and mixing with the atmosphere, may or may not have a tendency, with other combining causes, to increase the evils of the typhoid fever?—I think so; I think the way in which that operates is this, the exhalations of these gases, combining with other causes, produce considerable deterioration in the general health.

2423. Then your opinion is that these gases, mixing with the atmospheric air, are likely to injure the health of the community?—Certainly, but not to produce typhus fever; if the parties who are breathing this deteriorated atmosphere are brought in contact with the poison of typhus fever, they are more likely to imbibe that poison, to suffer from that poison, than others.

2424. Your evidence, if I understand it correctly, comes nearly to this point, that your opinion is, that this gas alone emanating from putrid bodies, will not of itself generate typhus fever?—Precisely.

2425. But if mixed with the atmosphere, and acting with other combined causes, will accelerate or will increase the evil?—Precisely; that is my opinion.

2426. What is the state of disease which is prevalent at the King's College Hospital?—Pretty much the same as at all hospitals; the ordinary chronic diseases, pulmonary diseases, and diseases of the heart; diseases of the abdominal viscera, of the brain, and so on.

2427. Is it your opinion that that situation is as healthy as one which is more in the open air?—I think that situation might be improved by getting rid of a great number of the little courts and alleys that are in the neighbourhood; but I do think there is a good large volume of air which the hospital enjoys in consequence of the existence of that burial-ground; I should be very sorry indeed to see the burial-ground removed.

2428. Your impression is, that the burial-ground being an open space, enables you to have some air?—Certainly; it enables us to ventilate.

2429. Sir *R. H. Inglis.*] And that the freedom of the air thereby circulated is a greater advantage to your patients in the hospital than the presence of any effluvium is an evil?—Certainly.

2430. Lord *Mahon.*] Have you ever had an opportunity of comparing together the various rates of mortality in your hospital and St. George's?—Yes, I have.

2431. State that to the Committee?—I can state that the mortality is precisely the same.

2432. Do you recollect what it is per cent.?—I obtained a note of it. The rate of mortality at most hospitals is one in twelve.

2433. *Chairman.*] And the number of patients discharged?—Pretty much the

Dr. *R. B. Todd.*

25 April 1842.

the same. I should say that our returns show a remarkable number of patients admitted into the hospital during the year, who do not appear to reside in the hospital very long; who do not appear to take a long time for cure.

2434. What is the average time they remain?—I should think about three weeks or a month.

2435. Do you suppose that in that time if there were injurious effluvium arising they would suffer from it?—I should think that if there was anything of a considerable effluvium likely to injure, that that injury would manifest itself in the course of a week or ten days.

2436. In less than three weeks?—Certainly.

2437. Mr. *Ainsworth.*] Have you never heard of any complaints as to the unpleasantness of the effluvium arising from that burial-ground?—Not in our building.

2438. At no period of the year?—When the hospital was first opened I heard some vague complaints, but I apprehend that that was more arising from fancy, arising from persons resident in the hospital, than anything else.

2439. What was the nature of those complaints?—They complained of smells which they perceived in the lower part of the building; for the last year and a half I have not heard of any such complaints.

2440. *Chairman.*] Have you any knowledge of the state of health in the houses immediately adjoining?—I should say little or none.

2441. Mr. *Ainsworth.*] As I understand, as a medical man, you have no objection to the state of King's College Hospital?—No objection.

2442. And you have experienced no fever arising from it?—None. Perhaps I might state to the Committee that this question was brought before the medical officers of the hospital in June, last year, by Mr. Baron Gurney, who is a warm friend of the hospital. Having read a book published by Mr. Walker on grave-yards, and having observed that some allusion was made in that book to the situation of the King's College Hospital, he requested the attention of the medical committee of the hospital to it, and we then drew up a statement on the subject for Mr. Baron Gurney, which, if the Committee will allow me, I should be glad to put in evidence. I should be glad if the Committee would allow me to state another circumstance connected with the building. Before it was taken for a hospital it was used as the workhouse of St. Clement Danes; it then frequently contained 500 persons at one time; now we never admit more than 120; it has frequently contained at one time as many as 500 persons; and Mr. Cosgreave, the late surgeon of the institution, assured me, at the time the negotiations were going on for the purchase of the building, that it was a remarkably healthy workhouse.

2443. Sir *R. H. Inglis.*] Are the windows in this hospital so placed in respect of each other that you can maintain a free current of air from one extremity of the building to the other?—Certainly; we can ventilate the building exceedingly well.

(The Witness delivered in the following document.)

COPY of a LETTER from the Medical Committee of King's College Hospital to the Honourable Mr. Baron *Gurney*, dated 21 June 1841.

THE Medical Committee of King's College Hospital beg to acknowledge the receipt of the letter addressed to them by Mr. Baron Gurney, referring to the work of Mr. Walker on grave-yards.

They quite agree with Mr. Walker that the metropolitan grave-yards are, in general, far too small for districts so densely peopled as those in which they are situate, and that, in consequence, graves are often prematurely disturbed; this gives rise to revolting scenes, such as Mr. Walker describes, and renders the grave-yards a great public nuisance.

The Committee also agree with Mr. Walker, that the untimely disturbance of graves gives escape to gases of a deleterious nature, which are developed in certain stages of the decomposition of animal matter; that the gases thus formed may and often do prove suddenly fatal to those who, like the grave-diggers, are exposed to them in a highly concentrated state; and that when diffused through the atmosphere they may prove injurious to the general health of persons frequently subjected to their influence. It is well known that these gases, when produced by the ordinary process of the chemist, give rise to similar effects in animals exposed to their influence.

But the Committee must express their decided dissent from the opinion advanced by Mr. Walker, and also set forth in some reports recently made to the Legislature, that typhus fever *originates* from the decomposition of animal or vegetable matter. They consider that typhus

typhus fever, like small-pox, is a disease propagated by contagion, or in other words, is produced by a specific poison generated in the body of a person affected with the disease, and nowhere else, and that consequently, the primary sources of infection are the living and not the dead. Dr. *R. B. Todd.* 25 April 1842.

If the concentration of the poison be secured by permitting its abundant emanation from the bodies of the infected, in a close and stagnant atmosphere of small rooms, its effects multiplied by exposing a great number of persons to its operation, and its accumulation in articles of dress and furniture provided for by neglect of the common practices of cleanliness, the most favourable conditions for the spread of the disease are obtained; and few persons who have observed the lamentable extent in which all these conditions are fulfilled, in many parts of the metropolis, inhabited by the poor, will deem it necessary to have recourse to any other supposition than contagion, in order to explain the occasional prevalence of fever in them.

The Committee have, however, much pleasure in stating, that during the past year, there has been very little fever in the neighbourhood of King's College Hospital; only 23 cases of fever have been received into the hospital, and the disease has not in a single instance been communicated to any inmate of it, whether officer or patient. The latter circumstance, the Committee are inclined to attribute in great measure to the care taken in ventilating the wards, and to the practice strictly enforced in the hospital, of removing the clothes and frequently cleansing and renewing the bedding of the patients, more especially of those labouring under any infectious disease.

In submitting the foregoing considerations to the notice of Mr. Baron Gurney, the medical committee cannot refrain from expressing their conviction that what might seem at first sight an objection to the hospital, its being situated in the midst of a poor and crowded district, is in reality the main cause of its usefulness, and its best title to support. No better proof of this can be given than the great number of persons (upwards of 7,700) who, during the first year of the establishment of the hospital, have applied there for relief.

The Committee have only to add their best acknowledgments to Mr. Baron Gurney for the interest he has so kindly manifested in King's College Hospital, by bringing this subject under their notice."

Rev. *John Russell*, D.D. Rector of Bishopgate, was called in; and Examined.

2444. *Chairman.*] YOU have been requested to attend this Committee in consequence of your name being mentioned with some others by the Bishop of London, expressing a desire that your testimony should be taken before us. The object of this Committee is to ascertain how far it is injurious to the health of the community to tolerate the interment of the dead within the precincts of towns. The object of our inquiry, therefore, is to ascertain whether a nuisance exists, and afterwards to suggest remedies for the nuisance. Will you have the kindness to state to the Committee generally, what your sentiments are, or what you may wish to mention, and then the Committee will put any particular questions which they think proper?—I confess my own opinion is, that it is very inconvenient that there should be any burials in churches. The first place where I had any duty in London was St. Michael's, Wood-street. In St. Michael's, Wood-street, they had no burial-ground for that parish; but there was another parish united with it, of St. Mary S , which had a small burial-ground. Whilst I was curate there, on one occasion a body was buried in the church, and certainly for three weeks afterwards it was the most sickening in the world to go into that church. The burial-ground of St. Mary S is much too small under any circumstances even for the population as it was at that time, which was in the year 1809. I was afterwards at another living in the city from Canterbury, St. Michael, Queenhithe, with Holy Trinity the Less. When Mr. Strong was rector, I believe they came to a determination that no bodies whatever should be buried in the church, unless on a joint agreement on the part of the rector and the churchwardens. I uniformly resisted it, except in cases of families who had previously had burials within the church. I think, upon one occasion, I insisted on a large payment; I forget the exact sum, but I think as much as 40*l.*, the intent being absolutely to prevent the thing; and the churchwardens said, "If you ask that, we shall ask the same sum." I believe it was paid in that instance, but that is the only case in which a burial took place there. There certainly a great deal of evil would arise if burials were allowed, and in that case there can be no question that it would be as well at once to say there should be no burials there at all. The parishioners at that time were friendly to that view of the case. Since I have been at Bishopgate I am not aware that the ground has been attended with any real inconvenience to the inhabitants. There have been complaints, but I do not know that they have been really well founded. The extent of ground I cannot Rev. *J. Russell*, D. D.

Rev. *J. Russell*, D. D.

25 April 1842.

speak accurately upon, but there was in the year 1833 an application from Lord Melbourne, who was then at the Home Office, for a return to be made of the extent of burying ground there was. I do not know that it was accurately taken, but it was stated to be 27,306 square yards when the return was made; I have a copy of the return here, which will state it to you and giving the number which have been buried within 10 years, and you would ascertain how far the ground was sufficient for the purpose; this is the return which was made to Lord Melbourne. I am not aware that the vaults under the church in Bishopgate are such as to create any inconvenience, but certainly I cannot speak so favourably of the great vault, as they call it, and I should certainly wish that as few burials as possible should take place there. Now it has struck me, in making inquiry into the matter, that it may be worth the consideration of this Committee to ascertain, with regard to persons who die, where they are buried. I sent to the Registry-office to inquire how many persons have been returned as dead in the parish for the last four years; in the year 1838, 360 deaths were registered, but we only find 261 burials, and 101 therefore are not at all accounted for; in the year 1839, 356 deaths were registered, but only 202 were buried in the parish, leaving 154; in the year 1840, there were 288 deaths registered, and 138 only were buried, leaving 150; in the year 1841 there were 340 deaths registered, but only 194 buried. This has raised in my mind a great inquiry as to what has become of all these bodies; it has created considerable doubts in my own mind as to the way in which the bodies have been disposed of.

2445. Have you any surmise on the subject?—I have nothing to go on. There are very few Jews in the parish; there are some few Roman-catholics. In three years there are no less than 450 bodies, of which I can find no account. It struck me it would be advisable that when the undertaker made his report of the death, he should at the same time make a report of the place where the burial should be made; and I think that ought to be suggested to this Committee.

2446. Do you suppose that these were persons who were buried in dissenting-grounds in order to avoid expense?—I have nothing to ground an opinion upon; I only give you these facts; I am not sure that they may not have been removed unfairly.

2447. Should you think so great a number could have been removed unfairly?—Not so great a number.

2448. You state the facts without giving an opinion?—I give you the facts.

2449. Lord *Mahon.*] When you say removed unfairly, you allude to purposes of dissection, probably?—It may have been for other purposes also, but I do not know.

2450. Mr. *R. Yorke.*] What other purposes than those of dissection could they have been removed for?—I can give no opinion on the subject; I am not able to speak to that point particularly.

2451. May I ask you if there are any other purposes of convenience or advantage for which they can be removed than those of dissection?—I am not able to speak on the point.

2452. *Chairman.*] Not knowing, you do not wish to say anything about it?—No; I might be throwing out suspicions which are not warranted, and I have no authority for throwing suspicion upon any one.

2453. Mr. *Ainsworth.*] You do not take into consideration the number of dissenters?—No, I merely give you the facts; I do not think the number of dissenters would at all account for the discrepancy between the return of deaths and the number returned as buried; it is considerably more than a third.

2454. Lord *Mahon.*] Have you any means of knowing whether there would be a similar disproportion in other London parishes?—I do not know; when I received the summons to come here, I sent to the Registry-office for an account of the deaths, and I compared them with my own burials that I might be prepared to answer any question on that subject.

2455. *Chairman.*] As far as your observation goes, you state that you are adverse to burying in churches?—Unquestionably; I would never have a burial in a church at all, and my feeling has always been against it.

2456. What is your impression with regard to the policy of interment in large towns?—I should say it is very inconvenient. In those two parishes which I mentioned before, it was very bad indeed; they had not space enough, and if the burying was to go on they must have got other ground.

2457. In your opinion it is a desecration towards the dead as well as the living?—Yes.

2458. Sir *R. H. Inglis.*] It appears, that taking the last year of the returns, which you have delivered in, the number registered as dying in your parish was 340, and the number buried, 194; do you conceive that a certain proportion of those who have not been buried within the parish in which they died may have been buried in the cemeteries?—No; I have all the returns of the burials in the cemeteries. The total burials from the beginning in the cemeteries are nine, from the year 1837 to the present time, in consecrated ground; there may be others in unconsecrated ground.

2459. Mr. *Ainsworth.*] Where is the church or the parish situate in London of which you speak?—In Bishopgate-street.

2460. How far is that from Globe-field?—Two miles.

2461. Sir *R. H. Inglis.*] That is not in your parish?—No.

2462. Mr. *Ainsworth.*] Knowing the distance to be only two miles, do you think there is any chance, from the great discrepancy in the number, that the bodies not buried may have been removed?—The impression on my mind was, that the number was far too great to allow for the ordinary burial of those who might be sent.

2463. We have been led to believe that the burial fees in this ground are much less than the church, and that consequently there has been an inducement to the poorer class to bury elsewhere?—I cannot speak with certainty on the subject.

2464. Lord *Mahon.*] Is it possible that, of this large number who have died within the parish, but who were not buried, a large proportion may have been buried by the grave-digger in the grave-yard, but omitted to be registered, for the purpose of saving the fees, or for some other fraudulent purpose?—I will not answer as to what may or may not have been done.

2465. Could such a thing happen?—They have access, unquestionably, to the ground.

2466. Would there have been a considerable saving in the fees by such a fraud?—They would have no claim to any fee at all. It certainly has not been done by the sexton. The persons engaged by the sexton in grave-digging were in custody a fortnight ago for improper proceedings in the grave-yard. They have been in custody so very lately that they may have been guilty; I cannot answer for them.

2467. Consequently you would not be disposed to place unlimited confidence in their trustworthiness?—No, they are not at all trustworthy. I have no reason to think that the responsible person has at all been guilty of the slightest impropriety. Whether his servants and persons employed under him may have been guilty, I will not venture to assert; I only state that their dishonesty has been proved, because they were in custody on a charge of robbing the ground within the last three weeks. They were charged, and were remanded for examination on a charge of having stolen lead.

2468. Sir *R. H. Inglis.*] The men being in custody is not proof, unless you have the conviction?—No; I state simply this, that I acquit the sexton completely of the slightest charge of anything wrong; and if I am asked whether the persons under him may or may not have done it, I can only say there is a possibility, but I do not believe that they have.

2469. Lord *Mahon.*] What is the fee on each interment?—The fee varies very considerably. I can hardly speak of the fees; I can only speak of my fees, which vary. Generally speaking, my fee on an average, in one case, is 3*s.*, and in the other case 2*s.*; and for a child it is somewhat less, except for those buried in the great vault.

2470. And there is the fee of the parish clerk?—The parish clerk has some fee; but I have never heeded much about the fees at all. The curate has generally entered the fees, and I have received them from time to time.

2471. Has not the sexton a fee also?—The sexton at Bishopgate receives a general payment from the parish; I forget what the sum is; and I do not think he has a particular fee for each case. Originally he had a right to a certain fee for each grave that he dug, but I rather think the whole was commuted on the appointment of the present sexton for an annual payment.

2472. The present sexton having held the office for what length of time?—For the last ten years.

Rev. *J. Russell*, D. D.

25 April 1842.

2473. Then might it not have been an object with the grave-digger or other subordinate persons to evade the payment of the fee jointly due to the rector and the clerk?—I do not think it at all likely.

2474. Mr. *R. Yorke.*] In allusion to the questions which Lord Mahon was putting just now as touching the discrepancy between the number buried and the number that should be buried, the number buried being about 194; allow me to ask you, what is your impression with regard to the disposition of the remainder?—I know nothing.

2475. Have you any objection to give your impression?—I really have no impression on the subject.

2476. I meant that from a person like yourself, an impression would be important if you felt justified in giving it?—I do not feel justified in giving it.

2477. Mr. *Ainsworth.*] It has been stated to this Committee, putting it generally, that the fees in dissenting burial-grounds are so much lower than those of churches, that it operates as an inducement to the poorer class; the fees which you state have been received appear to be extremely small, namely, 3*s.* and 2*s.* on the interment of a body?—That is all I received except for those buried in the vault of the church.

2478. What do you conceive will be the additional expense of those fees?—The additional expense will be very trifling, and I would state that the paupers in Bishopgate parish have been buried without any charge at all for years.

2479. Then there appears to be something different from other parishes?—I believe we have a legal claim to receive fees for every pauper that is buried, but at Bishopgate they have not been received, and they were not in the time of my predecessor, and of Dr. Conybeare, for 50 years, in which there is a list of pauper funerals with a blank. The question came before me in another capacity, namely, as the chairman of a board of guardians. The clerk made his demand, and I had to sit and adjudicate upon it. I said, "Show me an instance for 50 years in which such a fee has been paid to the clerk, sexton, or rector, for pauper funerals, and we will admit the question." He could not produce an instance, and we said that we could not establish the thing at Bishopgate; it has not been taken during the time of three or four rectors.

2480. Have you any idea what the sexton, or the clerk, has been paid?—I can give you no opinion upon it; it must be a very trifling payment; I know there is something like fourpence additional per grave to the sexton for digging, but they are wretchedly paid; it is grievous work.

2481. Then you consider that the sexton and the clerk and the clergyman would not suffer by an alteration in the interment of the dead?—I am quite sure that if the cemeteries were to pay me the smallest sum I should be a gainer on the average, if I received for all the bodies, as far as I am individually concerned; but I do not think that is the case with the parish clerk.

2482. I ask you individually?—I believe, individually, I should be a gainer; in the London Cemetery it is 5*s.* for a brick grave, and 1*s.* 6*d.* for the others, and putting the average together I should be rather a gainer if the cemeteries were to take all the bodies; in short, I should receive more than I do now if I was to receive for all the bodies buried

2483. Are you aware that in the Westminster Cemetery there is a payment made for the clergyman from whose parish the body comes, and that that is from 10*s.* to 11*s.*?—Yes, there is a payment in all the cemeteries, to a certain extent; it varies; the emolument at Bishopgate has been very slight indeed, the emolument I have received for the last four years from the burials.

2484. *Chairman.*] The next point I wish to direct your attention to is this; assuming that it is injurious to the health of the community that interment of the dead should take place in towns, are you prepared to suggest the remedy, which probably would be interments out of towns, but how that can be done so as not to interfere with vested rights, or put the community to great additional expense or inconvenience?—If you give to the clergyman of the parish the fee he has now for a burial, clearly it would make no difference to him whether the burial was in one place or the other; and if you removed that from him, and put the charge under another person, you ought to make him a compensation for that which you withdraw from him; but that would be very easily done by a little arrangement which you might make on the principle on which the cemeteries offer their payment to the incumbent; and if the 5*s.* in the one case is not enough, and 1*s.* 6*d.* in the other, I think that would be very easily met. The

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parish you must enable to move the bodies; the great difficulty will be with respect to the pauper bodies.

2485. What, in your opinion, would be the increase in expense to the parish from the removals?—The increase would depend on the distance.

2486. Mr. *R. Yorke.*] I wish to ask you whether you think, in any remedial measures, the clergy would be likely to meet those who wish to propose remedial measures?—I can answer for myself; but I do not think the character of the clergy has ever been not to do that; I think the character of the clergy would rather lead them to it.

2487. May I ask whether you think the clergy, like yourself, are sufficiently alive to the inconvenience?—It will entirely depend on whether they have felt it.

2488. Sir *R. H. Inglis.*] Have you ever considered the question of different parishes joining and purchasing under a legislative Act, ground for a cemetery common to them all?—No; but the parish of St. Olave and St. John's, on the borough side of the river, are at the present moment in treaty; they have a sum of money which they are going to lay out for a joint burial-ground.

2489. As in the case supposed in the question?—As in the case supposed in the question.

2490. *Chairman.*] Assuming that a legislative enactment was to be made prohibiting interments within the precincts of towns, under certain regulations, so as not to interfere with the vested rights of the clergy, is it your impression that an additional rate of a penny in the pound would enable the different parishes to defray the additional expense of transporting the bodies, of purchasing the ground, and of remunerating the clergy?—I have not gone into that question at all in a general way.

2491. Take the case now of your parish?—In my parish there would be a very great inconvenience, because they would say, "We have had hitherto for a number of years the power of burying our paupers without paying anything except the expense merely of digging the ground." If you put on them the expense of the removal of the bodies, they must purchase other ground for those bodies, and there would be a great inconvenience to them.

2492. Do you think a sum under a penny in the pound of additional rate would defray the expense of removing the bodies, or of making some such arrangement as the honourable Member has mentioned, of union with other parishes or with cemeteries, so as to enable them to find a decent place of interment of the dead out of the precincts of the town?—I have not gone into the calculation at all; but at the present time I rather think the city of London Union do bury their dead by an agreement with the new cemetery at the east end of the town, and that there would be no difficulty whatever in a parish which requires new ground taking the ground belonging to a cemetery company, and entering into an agreement for the interment of the bodies.

2493. Assuming that such a legislative enactment was formed, do you think that it would be desirable to vest the authority for purchasing lands or for conducting the interments of the parish paupers in the minister for the time being and churchwardens, or in any authority you can mention?—Those are questions on which I have not thought.

2494. My reason for putting the question to you is, that there are other Acts of Parliament which have been passed on the subject of purchasing lands, and the parochial authority has by the local Acts been vested in the minister and churchwardens for the time being?—I should think it would be a very good way of doing it generally.

2495. As far as you can at present form an idea, that would be a very good remedy?—I should think that would be as good a way as you could have it.

2496. Lord *Mahon.*] Have you found much ill-feeling or any differences prevail, in consequence of the present system of interment?—Yes, there have been constant disputes; I have had over and over again complaints of the grave-diggers; the grave-diggers will not fill in the grave unless they get 4*d.* paid; there have been many disputes, and appeals have been made to me on the subject constantly.

2497. *Chairman.*] It would be a source of great satisfaction to you if all that was removed?—Yes. It is sickening; it is horrible.

2498. Lord *Mahon.*] Supposing the same income could be secured from other sources, would it be a source of satisfaction to the clergy in general if the

Rev. *J. Russell*, D. D.

25 April 1842.

present mode of interment could be avoided?—I am quite sure it would; I have no question about it; I can only speak from my own experience; I have no scruple in stating that it has been a constant source of quarrelling.

2499. And there have been painful disputes as to the amount of fees?—Yes; very frequently parties have come who conceived that the whole money had been paid; and then comes the question, whether the grave-digger was to fill in the graves, he having refused to do it till he had the 4*d.* paid for each grave, and there are constant quarrellings on the subject.

2500. Mr. *R. Yorke.*] Allow me to ask, if you individually, from your long experience, would be glad to see a remedial measure on the present system?—Unquestionably I should; it is sickening, in a great measure.

2501. Mr. *Ainsworth.*] Do you think the clergy would have any objection to make some concession as regards the fees, if this evil which you speak of could be removed?—The clergy are differently circumstanced in different places; some of them have nothing but the fees to live upon. The paper I have in my hand is a paper which was given to me by a surveyor, having been one of a committee who went round to report to the Bishop of London the state of the different rectory-houses in the city of London. Allhallows-on-the-Wall was one; we examined the rectory, and found that it was a perfectly good house, perfectly fit in number of rooms and so on. When Mr. Lacey, who is the present incumbent, was appointed, he came and begged that we would review our report and declare it to be unfit. The Bishop of London then appointed a new committee, and on going over the house we said there was no reason for pronouncing it an unfit house, and after we had come to this report the surveyor sent us this report, and begged that we would send this specially to the Bishop of London. The paper is as follows: "Minutes of observations as to the rectory house of the parish of Allhallows-on-the-Wall, in the city of London. That the rectory house of this parish is situate on the north side of London Wall, with an aspect towards the south, light and air being afforded only in this direction; that it is a single house, *i. e.* without back rooms, a staircase in the centre, and one room on each side; that ventilation cannot be obtained on the north sides; that the rooms are narrow, not exceeding 14 feet in width on the upper floors, and not exceeding 12 feet 6 on the basement story; and that this arrangement renders the premises very inconvenient for a family consisting of 11 persons, of whom nine are females and children; that the premises are deficient in the convenience of water-closets and privies, and that considerable difficulty would arise in constructing a water-closet with access to the external air; that the house is extremely unhealthy; that persons sleeping in the chambers of the house find, on descending in the morning to the ground and basement stories, these parts of the house are extremely offensive, in consequence of the noisome vapours with which the air is loaded; that the health of the occupiers is seriously affected by this circumstance, and that the residents have been compelled perpetually to change their servants, the servants not being able to remain in consequence of illness; that, of the last two curates (being the only curates who have resided), the one, Mr. Davies, died of fever (although it is not in evidence that the fever was caused by the house), and the other, Mr. Andrews, left much out of health, after a few months' residence); that the only female servant in Mr. A.'s employ states that she could not have continued to reside, as her health was much injured. The cause of the insalubrity of the house may be readily given, viz., that the house has been built on land which for centuries previously had formed a part of the churchyard; that the soil is charged with animal matter in a state of decomposition; that in consequence of the basement story being sunk below the surface of the ground, the pavement and floor of the story are in actual contact with the soil so charged; that the walls of the house have settled and cracked in consequence of the building having been constructed on this description of soil; that in underpinning a main wall, a few months since, in consequence of its having settled, and of its fractured and damaged condition, it was necessary to remove a quantity of human bones and coffins, not only under the wall, but extending under the kitchen floor; that in excavating a few years since at the eastern extremity of these premises similar remains were found and removed; that the heat arising from the use of the kitchen, even for a very small family (*i. e.* two persons, the family of the last curate) the evaporation from the soil charged with this animal matter was greatly increased, and the effluvium extremely offensive and pernicious; the evidence of the person now using the premises for offices, between the hours of ten and four, is, that no consi-

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deration should induce him to bring a family to reside, as, even in the daytime, and with ventilation, the noisome vapour is sometimes perceptible; that the rector, although not dissatisfied with the apartments of the house as to number and size, with this information as to the insalubrity of the premises, obtained from positive experience and evidence of persons well acquainted with them, feels very greatly alarmed at the prospect of being required to bring a family, comprising nine females and young children, to reside therein, and considers that their insalubrity must render them quite unfit for his residence. *Note.*—The rector has been informed that the premises, a few years since, were inspected by commissioners, and were then reported to be 'a fit residence;' but it does not appear that the commissioners had any knowledge that the premises were so extremely unwholesome as they actually are, or had any knowledge of the condition of the basement being so close to the deposit of bodies and coffins. The premises might be deemed fit in reference to appropriation and number of apartments, but are unfit in consequence of unwholesomeness. Joseph Cox, the present sexton, No. 75, London Wall, and Mrs. Wilmot, formerly servant to Mr. Davis, the late curate, and now residing in Bevis Marks, can attest the truth of the above-mentioned statement." This paper was sent to me officially, and a copy of it was sent to the Bishop of London; and in consequence of this special report of the state of the house, Mr. Lacey has not come into the residence, but has taken a house in Finsbury Circus.

Rev. *J. Russell*, D. D.

25 April 1842.

2502. *Chairman.*] Generally speaking, then, you think any legislative enactments that did not interfere with the vested rights of the clergy, would be agreeable to the clergy?—I have no doubt of it; I am quite sure they would be to myself, and I think I might answer for all my brethren; but, of course, they must be protected in their property.

2503. The Hon. Mr. *Cowper.*] When you examined the house, and decided on its fitness, did you take into consideration any alleged insalubrity?—We went over it; we had then no statement of its insalubrity, but we had afterwards. I said, "If you will prove to us that it is insalubrious, we must make another question." This was three or four years ago, before this question had arisen. I said, "With regard to the rooms there are plenty of them, but if you show me any ground, you must state it;" and the document I have read was sent in on the occasion.

Mr. *Robert Baker*, called in; and Examined.

2504. Mr. *Beckett.*] YOU are a resident in the township of Leeds?—Yes.

Mr. *Robert Baker.*

2505. What is your profession?—Surgeon.

2506. How long have you lived in Leeds?—16 or 17 years.

2507. How near to the parish burial-ground have you resided?—For some part of that time close upon it.

2508. Has your attention been called to the state of the burial-ground, as to its sufficiency for the deaths that take place?—Frequently.

2509. Will you state to the Committee any peculiar case of interment which has come within your knowledge as to the sufficiency of the ground?—The ground itself is thoroughly full. I can state one particular case which occurred last Wednesday, but I speak generally of the ground as being extraordinarily full. I have prepared a document of the number of bodies interred within the area of the parochial ground.

2510. State the case to which you allude?—I was in the ground last Wednesday collecting information, and the sexton took me to a grave which they were then digging for the interment of a female; two feet below the surface they took out the body of a child which was said to be an illegitimate child, and it had been buried five years; below that, and two feet six inches from the surface, were two coffins side by side, the father and the brother of the person who was then going to have the interment; the father was buried in 1831; the coffins were opened, the bones were in a state of freshness; the matter had been putrefied off the bones, but they were perfectly fresh; they were thrown on the surface, and at that time the person came in who was going to have the interment; he spoke to me about it, and made use of this expression, "Look! these are the skulls of my father and my brother, and the bones of my relations, is not this a bad business? It cannot, I suppose, however, be helped; I must have a family grave." He was very much shocked; he stayed there a short time, and then went away a little distance.

Mr. *Robert Baker.*

25 April 1842.

2511. Mr. *R. Yorke.*] How did he know they were the skulls of his father and brother?—Because it was a family grave; the bottom part of the coffin was chopped up and thrown on the surface, and I examined it; the residue was in an effervescent, putrescent state; after the bottom part of the coffin had been taken out, a little soil was taken out again, and there were two other coffins side by side, containing the mother and the grandmother of the same person. These coffins were broken up in my presence and thrown out, and then there was gravel underneath; all these bodies had been buried at the short distance of two feet six inches; and then, at a depth of one foot six inches more, lay other coffins below them on gravel, and they were thrown on to the grave side in the way I have described to the Committee. I asked the sexton whether it was absolutely necessary that this should be, and his answer was that it was quite impossible it should be otherwise; that it was not a single occurrence, but was an every-day occurrence when they had to inter in that grave-yard; he mentioned two or three other cases of an exactly similar nature, which it is not needful to repeat, but which had occurred within the last ten days. I have prepared a map of the town of Leeds, and upon this map, which I will lay before the Committee, there are certain things put down which will show exactly the state of the yard. That is a map of the town, not of the parish. (*The Witness handed in the map above referred to.*)

2512. *Chairman.*] Will you have the kindness to state generally to the Committee, with reference to the plan of Leeds, what is the state of the different churchyards there; how far they are placed relatively to the population; and how far the fever or the cholera which took place there, to your knowledge, have occurred in this town?—The grave-yards of Leeds are divided into classes; the parochial ground, other church ground, and the ground for dissenters. The parochial ground is in three portions, one portion surrounding the church; another portion at a little distance from the church, divided by one of the main streets. The third portion is at a considerable distance from the parish church, round another church which is under the same parish; and then the rest, with the exception of one or two small yards of recent date, where not many interments are; the rest are dissenting grounds. The parochial grounds are in the centre of the largest population of the town of Leeds, and peculiarly the residences of the working classes; so much so, that they are situated in the north and north-east districts, of which the proportion of the population is in the following ratio: in the north-east district, 16,000 in round numbers of the population, 15,000 are of the working class; in the east, of 14,000 of the population, 13,000 are of the working class; in the north, of 12,000 of the population, 9,000 are of the working class. These numbers have increased a little since the census, but they are of the same ratio still.

2513. They keep the same proportions?—Yes; and these grave-yards are situated in the centre of this population. Now the parochial burial-ground has, through time, been filled up at thrice. In the first instance, the burial-ground around the church, comprising 1 acre and 18 perches, was first filled up many years ago. The first entry I know of an interment there is in 1572. I would observe, the first ground is capable of holding 1,978 graves, measuring seven feet by three feet six inches, which is the usual proportion of graves. The second ground, which consists of 2 acres and 12 perches, was filled up in 1830; it was capable of holding 3,689 graves. The third ground, which was bought in 1830 or 1831, consisting of 2 acres and 34 perches, was capable of holding 3,933 graves; the total aggregate being 5 acres, 1 rood, and 24 perches; and the total number of graves in that measurement being 9,600. Now, in that space for 9,600 graves, multiplied by three, as it used to be when these churchyards were first established, there have been buried, instead of 28,800 interments, which there ought to have been, no less than 142,293 bodies. I have here a paper of all the interments monthly since 1572, with the aggregate annually.

2514. Sir *R. H. Inglis.*] That is the date of the first register?—Yes; it is interesting to show, with regard to this ground, the increase which has taken place within the last 50 years, in periods of 10 years, and at a time when the churchyards were already full. In 1791 the number was 5,727; in 1801 the number was 7,807. In 1811, the number was 8,095; in 1821, the number was 8,057; in 1831, the number was 12,938; and in 1841, the number was 15,285.

2515. Mr. *R. Yorke.*] And the burial-ground is now no larger than it was in 1791?—

1791?—Yes; some addition has been made since then, but this includes the entire ground. Now, the last new ground was purchased in 1830, and the old ground was shut up, excepting for family graves; and it has since been a great privilege for persons to be buried there at all. Of the average number of parochial interments, namely, 13,032, the average number being 1,500 for the last 10 years buried in the parish ground, 1,100 have been put in that last new ground; and if you will allow me to read a statement of Mr. Alderman Tottie in the town council of Leeds, on an application for fresh ground, it will give you an idea of that ground, and it is very important. In 1841, a charge was made against the sexton and grave-digger for removing bodies, and that was brought before Alderman Tottie, as a magistrate. On bringing the matter before the town council, for the purpose of getting the remedy, he mentioned the circumstance, and as I have not his evidence directly to prove the condition of the ground, I will give you his words: "A charge was made against John Wild, the sexton, Thomas Jackson, the grave-digger at St. Mary's Church, and Joseph Beam, an apprentice of Wild's, respecting the opening of a grave in the burial-ground of that church, and the removal of a dead body, and the coffin in which it had been interred; the facts were clearly established, and it appeared from the evidence, and it was admitted by Wild, that not only in this case, but in many others, in consequence of there not being a space for a new grave in the whole burial-ground, at St. Mary's (except upon the hill, which is a rock, where it would require two or three days to dig a grave), it is the practice at every funeral there to open one or more of the old graves until a sufficient number are opened to receive the coffins waiting for interment; and that it is often necessary, for that purpose, to remove, for a time, the coffins previously interred, which was the case in this instance. The vicar's reply was, that St. Mary's burial-ground was made capable of holding only 2,400 bodies, and that there had then been 14,000 interments therein, which showed that some of these bodies must be occasionally removed into an adjoining grave. It appears from the statement of the present churchwardens that, up to the year 1830, the parochial burial-ground consisted of the churchyard and the ground between Kirkgate and York-street; these were so full, that in 1830 the parishoners, at the recommendation of the churchwardens, purchased the burial-ground at Quarry-hill, containing about four acres; there nearly all the interments have since taken place, in number 17,471, including about 3,000 still-born children. The average number of interments is 1,420 per annum, of which 1,100 are interred in that burial-ground, and the ground is so filled with dead bodies, that there will not be a possibility of finding room for the decent interment of more in six months from this time, if so long; of the numbers so buried, there are about 400 paupers annually, for whose interment the overseers of the poor pay the usual fee of 2*s.* each, which is the charge for a grave three feet deep, and about 400 per annum more are paid for at 4*s.* each, for a grave five feet deep. These facts render the conclusion palpable, that unless additional burial-ground is provided, not only will the health of the inhabitants of a considerable portion of the district around be in imminent danger, but their feelings, and especially of the poor, be most dangerously excited by the revolting exhibition of dead bodies without decent interment."

2516. *Chairman.*] You found it necessary to take steps to purchase other land?—Yes.

2517. Mr. *Beckett.*] Has any attempt been made by the inhabitants of Leeds to relieve themselves from the nuisance of the burial-ground?—Yes; there was an attempt within this year to raise a church-rate and obtain a burial-ground, which was refused by one of the largest parish meetings that has taken place for a long time.

2518. *Chairman.*] What amount of church-rate?—Very small; and the rate was refused.

2519. Mr. *Ainsworth.*] Was it stated at the time for what purpose?—Yes; it was specifically stated to be for a churchyard, and the then condition of the churchyard was stated.

2520. Mr. *R. Yorke.*] Was it stated on what ground the rate was refused?—A church-rate has lately been refused on all occasions.

2521. Mr. *Ainsworth.*] You stated that at different periods you have added to your burial-grounds?—Yes.

Mr. *Robert Baker.*

25 April 1842.

2522. How have you purchased the land?—By a church-rate. Finding the church-rate was refused, a second attempt was made through the instrumentality of the corporation. We wished to see if we could take part of the borough-rate to buy a burial-ground; and it was said, as we had no funds of the corporation excepting what was raised by rate, we could not do so.

2522.* Mr. *Beckett.*] A case was stated to the Attorney-general, and his opinion was taken?—Yes.

2523. *Chairman.*] You stated that all persons in Leeds almost, high and low, are agreed as to the necessity of some alteration taking place in your mode of interment?—The general opinion is that the churchyards are very full.

2524. And that it was desirable that some change should take place?—Certainly.

2525. For that purpose you say a large meeting was held of the rate-payers, and a shilling rate proposed?—Yes.

2526. But that rate was refused by the meeting?—Yes.

2527. In consequence of that result, you have stated that the opinion of the Attorney-general was taken?—In consequence of that, the town council were moved to see if they could buy a ground with their rate, and they were advised that the rate could not be so applied; but they were to take the opinion of the Attorney-general. The answer of the Attorney-general was, that they could not appropriate the borough-rate for any such purpose, as it was a borough-fund raised from the inhabitants for another purpose.

2528. And in consequence your grievance remains unredressed?—Yes.

2529. The Hon. Mr. *Cowper.*] Was the rate of 1*s.* which was proposed, intended to be devoted exclusively to a churchyard?—I believe not; but I cannot positively speak to that.

2530. Mr. *Beckett.*] I should imagine it must have been for other purposes, because, if I understand right, one penny in the pound would have been sufficient?—One penny in the pound, in the township of Leeds, would raise 1,200*l.*, and we could get six acres for that.

2531. Therefore you conceive that the rate of 1*s.* in the pound contemplated other objects?—Yes.

2532. *Chairman.*] Then for the purpose of getting a good cemetery for the population, do you think a penny in the pound quite sufficient?—Yes.

2533. Mr. *Beckett.*] State what your calculation is on the penny in the pound?—Here is a valuation in the borough by which it is clearly shown that a penny in the pound would raise about 1,200*l.* from the new valuation which has been made, and I think, within two miles of Leeds, we can get land at 200*l.* an acre, for this purpose. I calculate that a rate of two-pence in the pound would buy twelve acres of land; and it would very easily be got at in that form. The remedy is very simple with us.

2534. If you can once get an assessment?—Yes.

2535. *Chairman.*] Coming back to the map of Leeds, to which allusion has been made, you were stating, that the part in blue, which is marked in the centre of the town, was most affected with the cholera?—All the cholera streets are there marked blue.

2536. And that part of the town was affected with fever?—Yes.

2537. When does the fever take place?—Every year; it is singular that through successive years the fever shows itself in the same streets. I have a return of the cases of fever for several years, and also of the cholera streets marked on it, and the fever and the cholera are, through these successive years, in the same streets.

2538. Do you mean to say the progress of the fever has been in the same places where the cholera was?—It occupies the same position.

2539. You have alluded to the churchyard by a small stream, which is now so full that the wall has been thrown down?—Yes.

2540. Will you state the particulars of that?—The snow collected in the churchyard, and the ground was loose, in consequence of that portion of the churchyard having been used for the purpose of interring bones and pieces of coffins which were turned out of graves reopened, to make room for fresh interments; the ground was therefore light, being full of bones and pieces of wood, and when the snow came and stayed a considerable time afterwards, it broke down the wall. Having no rate, the wall could not be rebuilt, and last Wednesday I saw

saw bones and pieces of coffins sticking out of the ground in the face of those poor inhabitants who are living in that neighbourhood

2541. Is that near the blue line?—Yes.

2542. Is it in the centre of the map?—Not in the centre, but all round.

2543. Mr. *R. Yorke.*] It is called St. Peter's new burial-ground?—Yes.

2544. *Chairman.*] It is close to where the cholera broke out, and also where the fever followed?—It is about 100 yards; but I should mislead the Committee if I induced them to believe that I thought that was the reason of the cholera breaking out, but it is in the neighbourhood.

2545. How far situated is that unhealthy part of the town to which you have alluded from some churchyard in the town of Leeds?—The churchyards are in the centre of the inhabitants.

2546. Are there any churchyards besides?—All the churchyards and the chapelyards also are among the houses in all directions.

2547. Mr. *R. Yorke.*] Is St. Peter's the chief church in Leeds?—Yes.

2548. Who is the vicar?—Dr. Hook.

2549. *Chairman.*] Is the other part of the town of Leeds, except that particular spot in the centre marked on the map blue, is that healthy?—There is a very singular circumstance with regard to the town of Leeds, if you will allow me to refer to it. In the north and the north-east registration districts, where the population is, as I have described it, more than nine-tenths of the working classes (there are three districts), the deaths are 1 to 29, 1 to 30, and 1 to 36. In all the healthy parts of the town, the upper parts, where the streets are wide and the sewerage and ventilation is good, the deaths are 1 to 36, although the population is in the same ratio, namely, four and a half to a house.

2550. Mr. *R. Yorke.*] Have you ever observed, or heard it observed, that there has been an inconvenience from effluvium from the crowded state of that churchyard?—Yes; I have heard the inhabitants among whom I live in the neighbourhood complain of the churchyard being offensive.

2551. Colonel *Fox.*] Have you known people suffer in their health in any way?—No, I do not refer directly to any case of that sort; cases of fever are perpetually occurring among the inhabitants, which may arise from that cause or from want of drainage, which is equally as bad as the churchyard.

2552. *Chairman.*] Then your impression is, that the miasma arising from these churchyards may not be the leading cause, but an assisting cause?—Very materially, I think.

2553. But mixed with other causes; although not the original cause, it is a very strong assisting cause?—I think it would be an original cause in particular cases, but not as extensively. I think if the sexton was opening a grave it would be an original cause, but not an original cause over a large extent of surface.

2554. Mr. *R. Yorke.*] If I recollect Leeds rightly, I do not think you would say that the position of St. Peter's burial-ground is the very worst part of the town?—Nearly so.

2555. *Chairman.*] Is it your opinion that a legislative enactment, prohibiting the interment of the dead within the precincts of the town, would be beneficial to the health and acceptable to the inhabitants?—Absolutely essential to health, and most acceptable indeed.

2556. Colonel *Fox.*] Do you think there would be any prejudice among the middling and lower classes, to an enactment, by which quick-lime or other destroying matter should be placed in the coffins as they were buried?—My impression is, that there would be a strong prejudice against it.

2557. *Chairman.*] Would there be any inconvenience incurred by the poor people, if they were taken away for a mile or two miles, in following relatives to the graves?—None whatever, if the body was carried by an appointed hearse, as it ought to be. As I have said, we could obtain a grave-yard for Leeds at a very small cost, and by a very small rate, which would not only in the course of a very short time repay itself back again to the rate-payers, but would also form a fund for the purchase of other ground at a future period, and it would have also a still greater advantage, it would buy out the rights of the clergy for the interment of the dead.

2558. Mr. *R. Yorke.*] How would it repay you?—My mode of doing it is this: I would lay a rate on all the inhabitants, of 2 *d.* in the pound, in the township of Leeds, and that would raise 2,400 *l.*; with that I would buy 12 acres of land,

Mr. *Robert Baker.*

25 April 1842.

land, at 200 *l.* an acre, about two miles from the town; I would divide that land fairly between the two classes of persons, churchmen and dissenters.

2559. *Chairman.*] In proportion to their numbers?—Yes; I would vest the freehold in neither, but in the town council, giving them the power to lay the rate; if there were no town council, in the commissioners; if there were no commissioners, in the magistrates of the division, because the magistrates do divide all parts of the country into divisions. I would give those parties the power of burying their dead in any form they please, in their respective parts, so as not to interfere with their rites in any way whatever. In 1840 there were 2,600 interments in the township of Leeds; of those 2,600 interments, 1,332 in 1840 were buried in parochial ground; then that left the residue to be buried in the remaining churchyards, and in the grounds of the dissenters. Now of the remaining number of 1,281, which is left out of the total number of interments, the burials would be in the following proportion or thereabouts: In the churchyard of St. John's there would be 400, that being the annual amount of bodies buried there. At the church of Woodhouse probably about 250. At St. George's, St. Paul's, and Trinity, which are only, one or two of them, recent churches, and having catacombs underneath, these latter have about 40 each, which would be 720, leaving 551 for the cemetery, and the other places of interment. You will therefore see that the church would have 1,330 for the parish ground; and adding 480 for the other churches, not parish ground, and the rest for dissenters, it would give them about 700 or 800 interments annually.

2560. Mr. *R. Yorke.*] What is about the amount of the population of the township of Leeds?—Eighty-seven thousand; I speak all through, of the township.

2561. The average deaths are 2,600 a year?—They were 2,614 in 1840.

2562. Mr. *Ainsworth.*] Do you think that a proportionate arrangement, giving to the Church a certain portion of the new burial-ground, and to the dissenters a certain portion, and a rate being levied for such a purpose, would be satisfactory to the dissenters?—My impression is, that it would be very satisfactory.

2563. Mr. *Beckett.*] And to the Church?—Yes.

2564. Sir *R. H. Inglis.*] Does the proportion represent the property as well as the population?—I think it does.

2565. Mr. *Ainsworth.*] Is Dr. Hook favourable to your view?—He is very favourable. I was going on to say, that according to the measurement which I had made of the acreage of the churchyard, 5 acres 1 rood and 24 perches, would give 9,600 graves, allowing 7 feet by 3 feet 6 inches; six acres would give room for about 11,000 interments; which, multiplied by 5, being the number of bodies now in all cemeteries interred in one grave, would give 55,000 interments in one half, and 110,000 interments, therefore, in the whole space of 12 acres. Taking 2,000 as the average number of interments there for a series of years (it now only being 2,600 altogether in one year), taking these 2,600 interments, it may very easily be seen what period of time would elapse before the 11,000 interments would take place: the total amount of interments allowed for would be 110,000, and at 2,600 a year, allowing for some increase, you get exactly the number of years.

2566. *Chairman.*] You would have an increase in the ratio of five per cent., or ten per cent.?—Instead of saying 2,600, I would say 3,000 now, or more than that; and calculating it to take the average through succeeding years.

2567. In reference to what you stated just now, that you would recommend the freehold to be vested in the town council, or in the local magistrates; why should it not be vested in the officiating clergyman and the churchwardens?—If you put the freehold in neither party, neither in the Church nor Dissent, you accomplish two objects; you take from both sides the power of cavil, because they are allowed to bury according to their own rites, in any form they please, and you would sell the graves back again so as to pay, in three years, the rate which was levied. I have made the calculation in that way. There are 600 poor interred annually, which of course I count as nothing, because the graves are given; we will take the interments as calculated, at 2,000, there being 600 poor; then, as three-fourths of the population of Leeds are of the working classes, I calculate three-fourths of the interments to be at the lowest rate of interments for the working class, namely, 10*s.*; now there will be 900 interments at 10*s.*, which will be 450*l.*, one-third of the interments being of the best class; these interments, at 3*l.* each, would give 900*l.*, and make a total receipt of 1,350*l.*

2568. Mr. *Ainsworth.*] You do not, in that, take in the expense?—No; then I come to the expense of the yard-keeper, about 100*l.* a year, diggers, at 150*l.* a year, the fees at 60*l.* a year, incidental expenses at 200*l.*; I made it large for calculating it. Taking 500*l.* a year, for the expense of the keeping of the grave-yard, you would have a nett income for the first year, according to the interments of 1840, of 850*l.* In three years, therefore, you would pay off the rate, and it would be acceptable to the inhabitants to see that the rate was going to be brought back again in that way.

2569. *Chairman.*] Therefore your impression is, that it would be better to vest in the town council, or in the local magistrates, than in the clergy and churchwardens?—I do.

2570. Assuming that in some cases it was necessary to make a compensation out of the rate to the clergy, for the loss they incurred, would you think that having officiating ministers, the churchwardens would insure them that compensation better than the town council?—The enactment might be so that the clergy would be protected out of the receipts of the burial-ground, which would be far less objectionable than to leave it either with the town council or any other body.

2571. Mr. *Ainsworth.*] You only put down 60*l.* for the fees?—The rector tells me that all the fees in one year would not amount to more, and that he would be glad to take a composition of 40*l.*

2572. There are other churches; there is St. John's church, for instance; have you reckoned them?—No; but the proportion is small; 400 buried in St. John's; it would not amount to much.

2573. *Chairman.*] The compensation then to the clergy in Leeds, as far as Leeds is concerned, will be a very trifling sum?—It would not exceed 100*l.* a year.

2574. Mr. *Beckett.*] Taking it at 100*l.* a year, do you think that would provide for it?—Yes.

2575. *Chairman.*] Would 100*l.* a year cover it?—Yes; because if the fees for the burial of 1,300 persons are covered by 60*l.*, the number of church interments beyond that, where fees only are secured, is very small.

2576. Mr. *R. Yorke.*] You said it was desirable to keep such a ground as that you have spoken of from party distinction. Does it not strike you that in giving the ground to the town council you would essentially be making party property of it, since the town council will of course be composed of persons of every kind of religious persuasion?—That was the very reason I thought it would not be party property, because they are completely mixed, and they seem to be the best sort of guardians.

2577. That, in fact, there being a community of religious interests, the whole would coalesce for the same purpose?—I think so; and more particularly so, as lately we have had a local Act under which commissioners were chosen, and the commissioners have been chosen by the violence of party from the lowest of the working classes, and there is no security therefore in commissioners so chosen. But in the way I have stated I feel convinced that in three years the ground would be paid for, and in the next seven years sufficient would be raised for the future interment, and after that there would still be more than an abundance to buy out all the fees of the clergy and to do something for the town itself.

2578. *Chairman.*] Even assuming that calculation of yours to be a little sanguine, your impression is that a rate of two-pence in the pound would suffice?—Yes, I feel satisfied of that; I have taken everything at the very lowest possible calculation I could. I have not put in the profit of stones or graves, or anything which would be additional.

2579. Mr. *Ainsworth.*] In this calculation of fees which you say has, in some degree, received the sanction of Dr. Hook, was there any allowance made for the clerk and the sexton?—I think not; I will read exactly the fees that they have: for a common grave, three feet deep, the dues to the rector are 8*d.*, to the clerk in orders 4*d.*, and to the sexton and digger 1*s.*; that is 2*s.* Supposing it a double grave, five feet deep, the rector still gets only 8*d.*, the clerk in orders 4*d.*, and the diggers 3*s.*, making up the sum of 4*s.*, and 1*s.* 6*d.* a foot is added for every foot afterwards, until ten feet, and then 2*s.* a foot, which is counted labour, and the sexton gets it. The rector gets an additional fee of 10*s.* for every stone put down.

2580. Mr. *R. Yorke.*] Allow me to ask if it is common in Leeds to bury at only a depth of three feet?—Of late they have been burying at two feet six inches.

Mr. *Robert Baker.*

25 April 1842.

2581. Then it was more common to bury at three feet?—Yes.

2582. And inasmuch as burying at three feet was cheaper than at a greater depth, it is more common?—Yes.

2583. Colonel *Fox.*] With reference to the question I asked you about quick-lime, do you think the people would have any objection to quick-lime being put all round the outside of the coffin?—I think the general impression of the people as to any interference with the dead, for their immediate destruction, would be rather a prejudice against it than otherwise.

2584. If quick-lime were thrown in with the earth?—I cannot say.

2585. Mr. *R. Yorke.*] You stated that there was a churchyard where the wall had fallen, and where human bones are now projecting?—Yes.

2586. Yet that has no offensive character to the people, but they look on it as a matter of course?—The whole thing has a demoralizing effect.

2587. I think with you it has a demoralizing effect; but do the people speak of it as a grievance?—It has been so recent that I have not had an opportunity of hearing.

2588. *Chairman.*] Have you examined the vaults under the churches in the town of Leeds?—Yes; I was once in the catacombs of St. Paul's church; that is a place where they bury the dead in small squares. I was looking about me to see the interments, and there was one grave which had been filled with a flag against it, and the moisture had exuded from the body through that flag in all directions, and there were millions of black fleas covering it over in all directions.

2589. You do not mean the ordinary flea?—I did not examine it closely. The whole square was covered with these things in all directions, where the moisture had exuded from the body.

2590. Mr. *R. Yorke.*] You speak of St. Paul's, Leeds?—Yes.

2591. Mr. *Beckett.*] Can you state to the Committee the situation of other great towns near Leeds, as to their burying-grounds?—I am familiar with Bradford, Halifax, Keithley, Hull, and York.

2592. *Chairman.*] All in the same state?—Yes; there is a small burial-ground in the Pavement Church of York, which I remember for 35 years, perfectly well; and I remember 30 years ago a conversation I had with the sexton; it is not larger than a large building site; the sexton said he had not room to put an iron rod into the ground without disturbing human remains.

2593. Mr. *Beckett.*] Alluding to the present state of these towns, do you know whether any of them are in the same state of want of burying-ground?—They have got a cemetery at York, which is divided in the way I mentioned.

2594. I speak more of the manufacturing towns?—Halifax has got a cemetery; Bradford has not.

2595. The cemetery at Halifax is by private subscription?—Yes; I was in the yard at Bradford last Thursday, and spent some time with the clerk, and he gave me some evidence of the churchyard there.

2596. State it to the Committee?—The interments in the churchyard are divided in two by a number of posts, the chains of which have been taken away. Part of that churchyard belongs to commissioners, and is sold in the way I have been describing as at Leeds, and persons can have interments in that part of the churchyard on the payment of rather a larger sum, which the commissioners repay to the inhabitants in apportionment; the other half, being the yard of the church, is so full, that the grave-digger told me that it was quite impossible to dig a grave without disturbing human remains in all directions; in fact the yard is completely covered, as it is at Halifax; the whole yard is a complete flag.

2597. Have the inhabitants of Bradford taken measures to relieve themselves?—They have tried to get a little land opposite, on the other side of the street, but it is so high in price that they have not yet been able to purchase it.

2598. *Chairman.*] That is in the town, is it?—Yes; the number of interments annually is very large, as is the case in all other towns, and the churchyard is very full.

2599. Do you think that interment in the churches is likely to be injurious to the health of the inhabitants?—I have no doubt of it; I was in a church in Lincoln not long ago (and the observation applies to other churches) on a Saturday, when they were opening both doors of the church to allow thorough ventilation previous to Sunday, and a door had been put across to prevent dogs and people from getting in; I wanted to go in to look at the tombstones; the woman

who

who was cleaning the church let me in, and I asked her why the doors were opened with the partition I have alluded to; her answer was, that the church was in such a state during the week, that unless they had Saturday for ventilation, they could not well carry on the service on the Sunday. Mr. *Robert Baker*. 25 April 1842.

2600. Mr. *Ainsworth*.] In consequence of the vault being so full?—That was the interpretation I put on it.

2601. *Chairman*.] Do you suppose interment in leaden coffins to be a safeguard against the effluvium?—Not unless of a certain thickness; I had some conversation with Mr. Sinclair, the incumbent of St. George's church; he is much opposed to burying in the catacombs of churches. He stated to me that he was against it. In these churches many persons are buried in lead; but unless the lead is of a given thickness, no doubt frequent eruptions of gas take place.

2602. If the lead is of sufficient thickness, will not the evaporation of gas take place?—If it was of a sufficient thickness, it might prevent that.

2603. Mr. *Beckett*.] The usual thickness?—Certainly not; I will explain another mode of interment which we adopt in large towns in Yorkshire lately, which is admirably adapted to the purpose; I was present when a man was making a coffin for a friend, and he made it with very thick wood, and then put in a shell with interstices of wood with the space probably of three shillings put together; small circles all over the interior at the bottom, and the end which kept the shell from the coffin, and then the interstices were filled up with boiling pitch; in fact it was a coffin with boiling pitch put in of the thickness of half an inch.

2604. What was the object of that?—To act as a leaden coffin.

2605. Colonel *Fox*] Is it your opinion, medically, that a damp locality is worse for a burial-ground than a dry one, in the effect on the population?—I do not exactly know how to give an answer to that question. The escape of gas would be more perfect in a dry soil than a damp one.

2605*. Is the ground, within a distance of two miles round Leeds, generally dry, or is it swampy?—It is not swampy, nor is it particularly dry; it is neither the one nor the other.

2606. Mr. *R. Yorke*.] Is there any other burial-ground besides that in the Pavement in York which you think objectionable?—I do not know one which is not objectionable.

William Beckett, Esq. a Member of the Committee, Examined.

2607. *Chairman*.] YOU have heard the evidence given by Mr. Baker?—Yes. *Wm. Beckett*, Esq. M. P.

2608. Do you coincide with it?—Yes, in every respect.

2609. A question was put to Mr. Baker with regard to what took place respecting the intention of the new cemetery to supply the deficiency. Will you have the kindness to give an answer to the question, which he was unable to do, as to what took place on that occasion?—Some years ago a great want of burial-grounds was felt, and a number of the inhabitants of Leeds, of all religious persuasions, subscribed a certain sum, and when the ground was bought and finished, that portion of the subscribers who were attached to the church, proposed that it should be consecrated. A meeting was held, a vote was taken, and that proposal was negatived by the dissenters from the church saying they did not intend to attach the ground to a church. The consequence is, that it is now entirely at the disposal of the dissenters.

2610. Your opinion is, that a general legislative enactment would prevent the recurrence of that?—Yes.

2611. Colonel *Fox*.] Was the money which was subscribed by the church party returned?—No.

2612. Mr. *Ainsworth*.] Do you conceive that an objection would be raised by the dissenters if the church party were to propose the taking a certain portion of the ground?—I am not able to answer that.

Sir *James Fellowes*, M. D. called in; and Examined.

2613. *Chairman*.] WE understand you are present desiring to explain a part of your evidence?—The few remarks I have submitted to the Committee refer Sir *James Fellowes*, M. D.

Sir *James Fellowes*, M.D.

25 April 1842.

to the custom of burying the dead in warm climates, and especially in Spain, where, as head of the medical department of the army at Cadiz, and a member of the Junta de Sanidad, I had opportunities of knowing the practice of burying in churches was general throughout the country, in defiance of the prohibitory decrees of the Council of Castile. The influence of the Roman-catholic priests and the fear of purgatory had hitherto operated so powerfully on the minds of a bigoted people, that the custom of keeping the bodies of the dead in their churches would have been continued had not the fatal pestilential disorder broken out in 1800, and spread terror and devastation at Cadiz, Seville, Malaga, and other towns of Andalusia and at Gibraltar, during the years 1804, 1810, and 1813. Although it is not inferred that this epidemic would be traced to this supposed source of mischief, viz. the accumulation of numerous dead bodies in the bovedar or vaults, it was considered so injurious to the public health, that the laws, so long dormant, were put in force without delay by the juntas established in every district. Orders were issued for the laying out extensive burial-grounds at proper distances outside the towns, whither all the dead were conveyed, and deposited with due observance of the rites and ceremonies of the Roman-catholic church. In reply to a question of the honourable baronet, Sir R. Inglis, the expenses of removing the dead to those places of sepulture were defrayed by municipal regulations and sanctioned by the general codes; and from that period to the present time (1842), I believe the barbarous practice of burying in churches and in the towns throughout Spain, and in most Roman-catholic churches, has been discontinued. Although there may have been no apparent evil arising from the custom still prevailing amongst us of burying our dead under the churches, and in burial-grounds adjoining them, of this vast metropolis, and in the very centre of our large and crowded towns, yet it becomes a serious question, with an increased and increasing population, upon what rational grounds such an objectionable feature can be longer continued without danger to the public health.

2614. Colonel *Fox.*] Do you consider that the middling and lower classes in this country would have any prejudice with regard to having lime?—I do not think it would be necessary to apply lime, provided the bodies were buried outside the town.

Mr. *Charles Ewens Deacon*, called in; and Examined.

Mr. *Charles E. Deacon.*

2615. *Chairman.*] WHAT situation do you hold at Southampton?—Town Clerk.

2616. Will you state generally to the Committee what has come under your knowledge in reference to your district?—In the town of Southampton there is a great want of accommodation for the burial of the dead.

2617. Will you state the particulars to the Committee?—The common burial-ground for the town consists only of about two acres and two roods of land.

2618. Colonel *Fox.*] Is it in the heart of the town?—In a very densely populated part of the town.

2619. *Chairman.*] How long has this been used as a burying-ground?—Upwards of 500 years.

2620. What is the average number of persons buried in the town?—Within the last four or five years the average has been about 500.

2621. Five hundred every year?—Yes; I should state that the population of Southampton has greatly increased during the present century. The population of Southampton as taken in the year 1801, was 7,700 persons, and in the year 1841 it was between 27,000 and 28,000. It may be as well that I should state the evil as it now exists: the churchyard is so full, that they are obliged to dig up an old path which crosses the churchyard, in order to find even room for the interments at the present time, and whether there will be sufficient room, even taking that, for the present year, is very doubtful. Oftentimes coffins are obliged to be placed on the ground, being removed from their situations to make room for others, and some most disgusting scenes have occasionally taken place there. In the year 1827, the borough council, feeling that this evil increased, and the epidemic prevailing at that time to a very considerable extent, took the matter up. It prevailed particularly in this part of the town. They appointed a committee from their body to take the matter into consideration, and from that time to the present they have been unable to obtain ground for the purpose; but at the fall of the last year it was determined by the borough council

council to apply to Parliament to establish a cemetery on the common, and a petition was presented and a bill prepared accordingly; but in consequence of the general measure which has been introduced, the council have determined that it shall stand over for another year.

2622. *Chairman.*] Had you not some difficulty with regard to the arrangement between Churchmen and Dissenters?—I think there would have been some difficulty. It became necessary, as the land proposed to be taken was common land, over which the inhabitant rate-payers exercised a right of common, to call a vestry meeting to get their consent. There was considerable cabal at the meeting, and it was rejected.

2623. Colonel *Fox.*] What was the ostensible reason which they gave for rejecting it?—It was from some political feeling embarked in it. Great difficulty has been experienced in obtaining land hitherto without success, and the town is in this distressing state.

2624. Mr. *Ainsworth.*] At what distance from the town was it contemplated to take the land?—About two miles. It was necessary to obtain the consent of the rate-payers of the town, who exercised a right of common over it, and a difference of opinion prevailed amongst them; some of the vestry objected to the measure.

2625. *Chairman.*] Do you consider this place of interment, being in the centre of Southampton, which you took notice of during the epidemic, is unhealthy to the place?—Decidedly; and the medical men of the town have brought the subject forward on several occasions.

2626. Stating that it was injurious in its result?—Certainly.

2627. Can you form an idea of the number of persons interred in these two acres and three roods which you mention?—I cannot; it has been the common burial-place of the inhabitants of Southampton for centuries.

2628. Five hundred taking place every year as the average you mentioned, you cannot suppose that less than 30,000 people have been buried?—The town has increased very rapidly during the last few years.

2629. You cannot form an estimate of the number?—No, but it is as full as it can possibly be, and most disgusting scenes are occasionally witnessed there.

2630. Mr. *R. Yorke.*] Is it the only burial-place in the town of Southampton?—It is the common burial-place; there are two others for separate parishes, one in St. John's, which is 10 perches; and there is also a burial-ground in the parish of All Saints, which is 1 rood 22 perches.

2631. Is this common burial-ground, which you say has existed for 500 years, no larger at present than it is supposed to have been 500 years ago?—It is no larger.

2632. It is attached to which church?—The church of St. Mary.

2633. You stated that occasionally very disgusting scenes are witnessed there; could you more immediately specify what character of scenes?—Parts of bodies have been taken out, skulls with the hair remaining on them.

2634. Then that proves that the bodies must have been recently interred?—No doubt.

2635. Are the bodies interred very near the surface of the earth?—It is crammed full.

2636. *Chairman.*] Do you know anything of the circumstance of a body being exposed there?—No; I have been told that coffins have been occasionally taken out and put on the ground while making room for others to be placed in the ground.

2637. Do you know of the circumstance of a female being exposed?—A case appeared in the papers three or four months ago; a man of the name of Targit, whose wife had been buried twelve months previously, complained that not only was the coffin in which his wife was buried exposed, but it had broken in and a portion of the drapery was exposed; he seemed much offended, and there was some correspondence published in the newspaper in consequence.

2638. What description of epidemic is this to which you allude?—It prevailed about the year 1827, generally throughout various towns of England; I do not know exactly its character. I did not at that time fill the office of town clerk, but I find in the proceedings of the committee, they set forth a letter, written by the mayor of the town, to Earl Guildford, as follows:—"Southampton, March 22, 1837. My Lord,—Enclosed, I have the honour to transmit to your Lordship a copy of the proceedings of a committee, appointed by the council of this borough

Mr. *Charles E. Deacon.*

25 April 1842.

to consider what course should be taken with a view of providing additional accommodation for the burial of the dead in this borough, and to request your Lordship's assistance in enabling the council to provide for the necessity of the case. For some years past, the great inadequacy of the present burial-grounds, in Southampton, for the numerous and increasing population of the town, has been a subject of constant complaint amongst all classes, and the state of the churchyard of the parish of which your Lordship is the rector, particularly attracted public attention. During the prevalence of the late epidemic, the evil was felt in an unprecedented degree; and the scenes that were, in consequence, daily exhibited in St. Mary's churchyard, were of the most painful and even disgusting description. Under these circumstances, the subject was brought under the notice of the council, and they, impressed with a strong conviction of the necessity of applying a speedy remedy to this increasing evil, appointed a committee for the purpose of devising some plan for carrying the proposed object into effect. This committee have met twice, and, at their second meeting, conferred with the clergymen of the different parishes in the town, and they unite with the committee in their views of the entire insufficiency of the present burial accommodation, and in their anxiety to provide some effectual remedy; but before deciding on the adoption of any definite line of proceeding, they are desirous of laying the case before your Lordship, as the rector of the parish in which the common burial-ground of the town is. In compliance, therefore, with the last resolution of the committee, I have to request your Lordship's sanction to, and co-operation with, their exertions to provide additional accommodation for burial commensurate with the wants of the large and increasing population of the town. They request your Lordship's consideration of the possibility of accommodating the public with the piece of land mentioned in their resolution, part of the glebe belonging to your Lordship, which appears the most eligible and convenient for the purpose, upon such terms as may hereafter be agreed on. From the great increase of buildings land is become very scarce, which has induced the council to apply to your Lordship to accommodate the town with some of the glebe, and the council trust your Lordship will see the difficulty they are under in procuring any land which, from its distance from the town, would not be most harassing and distressing to the clergy officiating, and to all parties attending the burials, and especially the poor. I have the honour to be, my Lord, your Lordship's most obedient humble servant, *C. Du Cane*, Mayor."

2639. Mr. *R. Yorke.*] You had the cholera, I think, in Southampton?—I think that was the time.

2640. Is that the epidemic to which you refer?—Yes.

2641. *Chairman.*] Did you find the epidemic to which you alluded follow nearly in the same steps as the cholera?—Yes.

2642. In nearly the same vicinity?—Yes.

2643. Was that in the vicinity of the churchyard?—I do not know that it was to a greater extent there than in other parts of the town.

2644. Is the part of the town which is unhealthy in the vicinity of the churchyard?—It is in a low part of the town, and densely peopled.

2645. Have you persons interred in the vaults of the church?—Yes, there are, in the catacombs under two churches; but the cost of interment is so great that it is only the rich who can be interred there. The average number of deaths in Southampton is 700; of that number nearly 500 are buried in St. Mary's churchyard, where the fees are very low, the only fee being 2*s.* 6*d.*

2646. Do you consider there is any probability of effluvium arising from the vaults under the churches?—I am not competent to give a decided answer.

2647. But your general impression is, that interment in the town is injurious to the health of the inhabitants?—Most decidedly.

2648. Mr. *R. Yorke.*] Were the persons who died of cholera buried in this churchyard?—It is the general burying place.

Mercurii, 27° die Aprilis, 1842.

MEMBERS PRESENT.

Colonel Acton.
Mr. Ainsworth.
Lord Ashley.
Sir W. Clay.
Mr. Cowper.
Mr. Denison.
Colonel Fox.
Sir R. H. Inglis.
Mr. Kemble.
Lord Mahon.
Mr. Vernon.

W. A. MACKINNON, Esq. in the Chair.

Mr. *Charles Ewens Deacon*, called in; and further Examined.

Mr. *Charles E. Deacon.*
27 April 1842.

2649. *Chairman.*] WILL you state to the Committee any further observations you would wish to make?—I wish to add to one or two of the answers I have given. Question 2622 was, "Had you not some difficulty with regard to the arrangement between Churchmen and Dissenters?" The answer was, "I think there would have been some difficulty." The difficulty with regard to the arrangement between Churchmen and Dissenters would apply as to the consecration of the land proposed to be taken for a cemetery, whether the whole or a part should be consecrated.

2650. Do you mean to state that it was difficult to get land on account of that?—No; land is extremely valuable in the neighbourhood of Southampton, and there were no funds with which that land could be purchased. Negotiations were entered into, and parties asked as much as 3,000*l.* an acre; the council therefore determined to take a portion of their own land, Southampton Common, 20 acres of it, the fee being vested in the corporation, but over which the inhabitant householders, rate-payers, exercised a right of common. It was necessary to call vestry meetings, and I called vestry meetings of several of the parishes in the town, and I found at those vestry meetings a difference of opinion existing, some objecting to the plan being carried into effect by the borough council, as not being within their province, and the others thought the spot selected was rather too distant from the town; and I think also there was some political feeling mixed up in it.

2651. In fact, you found it difficult to carry on the business as a private matter?—We found this difficulty: In the five vestry meetings they all passed resolutions of the absolute necessity of additional burying-grounds, but three out of the five objected to its being carried into effect by the borough council. A poll was not demanded at those vestry meetings, and the consequence was, that those who happened to be there, a very few, comparatively speaking, of the inhabitants, carried resolutions against the measure being carried into effect by the council.

2652. All that difficulty would have been got rid of by a general measure?—Yes; the council would not have abandoned the measure, notwithstanding the three vestry meetings, so strongly do they feel its absolute necessity, had it not been for the subject being brought before Parliament by the Chairman of this Committee.

2653. If there were a general measure of legislation on the subject, all those difficulties which have arisen between the town council and other parties in the town would have been got rid of?—Exactly so. I have only further to say, that the authorities of the town have made every attempt since 1837, but without success, to provide additional accommodation for the burial of the dead in that large and increasing town.

2654. In consequence of the difficulty of making any local arrangement on the subject?—Yes.

2655. Mr. *Ainsworth.*] There is some land which it has been thought advisable to retain for the purposes of a burial-ground, two miles distant from the town?—Yes.

Mr. *Charles E. Deacon.*

27 April 1842.

2656. That is not considered too great a distance by the town council?—They thought not; they thought it was the most eligible spot they could get, inasmuch as they would not have to pay for it, it being their own.

2657. The distance was not considered objectionable?—They would have preferred its being rather nearer, but they thought that objection not sufficient to prevent their looking to it.

2658. Colonel *Acton.*] How did they propose removing the bodies to that distance of two miles; did they propose any particular mode of raising funds for the purpose?—The council calculated that the fees they should receive from the rich would enable them to convey the poorer classes at a very inconsiderable expense.

James Copland, Esquire, M.D., Censor of the Royal College of Physicians, and F.R.S. called in; and Examined.

Dr. *J. Copland,* M. D.

2659. *Chairman.*] YOU are aware of the object of this Committee; will you have the kindness to state your sentiments on the subject of interment in large towns?—I believe that the health of large towns is influenced by four or five particular circumstances; the first, and probably one of the most important, is the burial of the dead in large towns; the confined air; the general closeness of buildings, and the consequent want of ventilation; the circumstances connected with drainage and sewarage, and the contamination thereby occasioned of the water which is drunk by the inhabitants; so that in considering the burial of the dead in large towns we have to consider not only the exhalation of the gases and emanations of the dead into the air, but also the effect that such burial has on the sub-soil or the water drunk by the inhabitants. This is a circumstance which has not been so much attended to as it ought till recent times, but which has, in fact, occupied the minds of the thinking part of the medical profession ever since the days of Hippocrates, who has a long chapter on the influence of air, water, and localities on the health of communities,—the chief agencies which vitiate or affect the health of the inhabitants of large towns.

2660. Is it your opinion that water which runs through a churchyard will imbibe gases and putrefy the water in the wells?—It is fully ascertained and well recognized that the alluvial soil, or whatever soil that receives the exuviæ of animal matter, or the bodies of dead animals, will become remarkably rich in general; it will abound in animal matter, and the water that percolates through the soil thus enriched will thus become injurious to the health of individuals using it; that has been proved on many occasions, and especially in warm climates, and several very remarkable facts illustrative of it occurred in the Peninsula campaigns. It was found, for instance, at Ciudad Rodrigo, where, as Sir James Macgregor states, in his account of the health of the army, there were 20,000 dead bodies put into the ground within the space of two or three months, that this circumstance appeared to influence the health of the troops, inasmuch as for some months afterwards all those exposed to the emanations from the soil, as well as obliged to drink the water from the sunk wells, were affected by malignant and low fevers and by dysenteries, or fevers frequently putting on a dysenteric character. In proportion as the water which the inhabitants drink abounds with animal matter so will they be subject to dysentery and fevers presenting what is called an enteric or a dysenteric character. The digestive operations are affected by water abounding with putrid animal matter; so that burying in large towns affects the health of individuals, in the first place, by emanations into the atmosphere, and in the second place, by poisoning the water percolating through that soil.

2661. The filtration of water will take away all substances, but will not take away the gases which such water has incorporated with it?—If the filtration is supposed to go through a new soil, it will, to a certain extent, purify the water, and deprive it of its grosser materials, but still there will be a certain degree of contamination remaining in the water; but the consequence of burying in towns, for instance in old cities, is that the soil is contaminated to a great depth, and the water, in percolating through that soil, is affected by the morbific matter. This was one cause, probably, of the diseases in Paris, until some means had been used to purify the Seine water. The water in the River Seine is principally used for the drink of the inhabitants, and there are certain wells sunk from

Dr. *J. Copland*, M. D.

27 April 1842.

from which other parts of the community are supplied; but, in consequence of this cause, fevers prevail in Paris, at certain times especially, generally presenting this particular enteric or dysenteric character; for, in connexion with the febrile condition, there is a predominant morbid action produced in the alimentary canal. I have had an opportunity lately of referring to the accounts of the epidemic fever that prevailed in Ireland at different times, and especially during the years 1817, 1818, 1819, and 1820; I speak from recollection, but my recollection on the matter is tolerably strong. In the physicians' reports on that fever, it appears that the fever assumed a malignant form, associated with this morbid condition of the alimentary canal, and that, for instance in the city of Cork, and several other towns, the water that was used for the drink of the inhabitants received the sewers, and consequently the exuviæ of those who drank the water; and hence the reason why the disease appeared of a malignant form, affecting, as it were, the vital cohesion of the tissues, the mucus surfaces of the stomach and the bowels, and at the same time contaminating the blood itself.

2662. Do you consider that the water which has been filtered through a churchyard in that way would acquire any taste, or would it be injurious, assuming that there was no taste and no smell?—I believe it would; the water might not betray its impurity to the senses, though constantly using it, or using it without any substance to counteract its effect, would be injurious. A remarkable fact occurred to me about two years ago: I was called in the course of my profession to see a gentleman, advanced in life, well known to many Members of this House, and intimately known to the Speaker. This gentleman one Sunday went into a dissenting chapel, where the principal part of the hearers as they died were buried in the ground or vaults underneath; I was called to him on Tuesday evening, and I found him labouring under symptoms of malignant fever; either on that visit or the visit immediately following, on questioning him on the circumstances which could have given rise to this very malignant form of fever, for it was then so malignant that its fatal issue was evident, he said that he had gone on the Sunday before (this being on the Tuesday afternoon) to this dissenting chapel, and on going up the steps to the chapel he felt a rush of foul air issuing from the grated openings existing on each side of the steps; the effect upon him was instantaneous; it produced a feeling of sinking, with nausea, and so great debility, that he scarcely could get into the chapel; he remained a short time, and finding this feeling increase he went out, went home, was obliged to go to bed, and there he remained. When I saw him he had, up to the time of my ascertaining the origin of his complaint, slept with his wife; he died eight days afterwards: his wife caught the disease and died in eight days also, having experienced the same symptoms. Those two instances, illustrated the form of fever arising from those particular causes. Means of counteraction were used, and the fever did not extend to any other members of the family.

2663. Assuming that that individual had gone into a crowded hospital with that fever, it probably would have become a contagious fever?—The disease would have propagated itself most likely to others, provided those others exposed to the infection were predisposed to the infection, or if the apartments where they were confined were not fully ventilated; but in most cases where the emanations from the sick are duly diluted by fresh air, they are rendered innoxious. It is rarely that I have found the effects from dead animal matter so very decisive as in this case, because in the usual circumstances of burying in towns, the fetid or foul air exhaled from the dead is generally so diluted and scattered by the wind as to produce only a general ill effect upon those predisposed; it affects the health of the community by lowering the vital powers, weakening the digestive processes, but without producing any prominent or specific disease.

2664. Sir *Robert Inglis.*] Can you state to the Committee the locality of the chapel to which your former answer applied?—To that I would beg leave to say, that not being very positive, and speaking from recollection, my recollection bears me out only in saying that it was within the bounds of the city, and to the eastward of Chancery-lane.

2665. Mr. *Kemble.*] Had you attended this gentleman before?—I had attended members of his family before, but he had been in good health previously; I believe he had scarcely ever ailed anything during his life.

2666. Do you know his age?—He was upwards of 70, I think, and his wife about

Dr. *J. Copland*, M. D.

27 April 1842.

about 70, probably, but a very active man; he lived out of town, and walked into town and returned daily.

2667. *Chairman.*] Do you consider that those gases emanating from persons interred in the ground are more injurious at any particular season of the year than at others?—I think that they will be more injurious in certain seasons. The Committee have all probably heard of Dr. Sydenham, and his works regarding the state of health in London, for several years of epidemics prevailing from the year 1660, and long subsequently to the plague. In looking into his works, I have particularly remarked that though he touches upon the subject of epidemics, and the particular form they assumed in London, he never made any mention of the causes of those epidemics or their origin. One can scarcely read his accounts of the epidemics that prevailed after the great plague in 1665 and 1666, without being struck by the circumstance of the fevers, and in fact of the diseases, generally epidemic, for some years afterwards, having been chiefly caused by the emanations proceeding from the number of bodies put into the earth during the plague. I should conclude from *a priori* reasoning, with the light which science has bestowed upon us, that after 100,000 bodies had been put into the earth, during the latter part of 1665 and the beginning of 1666, the emanations from those bodies would operate to a great extent upon the health of the community, especially when the soil was to a certain extent acted on by the rays of the sun, for in many instances the dead were not covered by many feet of earth; and Dr. Sydenham informs us that in the following three years after the season of the plague there was prevalent in London a putrid or malignant fever, just what might have been expected; first, there was a morbific influence produced through the medium of the atmosphere, affecting through the medium of the lungs and circulating fluids those predisposed and less able to bear this mode of contamination; then the three years again following that period, the fever changed its character, and presented an enteric or dysenteric form, showing that by that time the water that had percolated, as it were, through the soil and been used by the greater portion of the inhabitants, had become so contaminated, as to occasion a disease varying in its character with the particular causes in which it originated. These facts are illustrative of principles which men of science would recognize in the present day, though not sufficiently adverted to when medical men viewed disease rather empirically than scientifically. There is one circumstance that may be noticed in connexion with burying in open ground in large cities, namely, that if the number of interments were few, the injury might not, perhaps, be very appreciable; it would be a lesser evil than building up and crowding together; for the deprivation of ventilation consequent on the crowded state of a city is almost as great an evil as the emanations proceeding from the dead. In the exercise of my profession during the rather more than 20 years I have been in practice in London, I have always made it a principle, if I was called to a person labouring under disease in the neighbourhood of a burying-ground, to advert to the circumstance, and to advise removal into the country as soon as was consistent with the power of the individual to remove. In some cases I have been convinced of the injurious effect of this cause on the general health, and this without reference to the particular disease under which the individual was labouring; for whatever depresses the powers of life will render the constitution disposed to disease of various kinds; and the emanations from the dead remarkably depress the powers of life.

2668. Sir *R. H. Inglis.*] Do you consider that typhus fever originates from the decomposition of animal or vegetable matter?—Fever presents a great variety of forms, and those forms generally ought to be connected with the causes from which they originate; typhus fever more particularly arises from a seminium proceeding from individuals already labouring under disease, and from a number of individuals shut up in a close or confined atmosphere; the disease which we call the true typhus presents a general uniform character, a certain specific form, as small-pox or measles; but the malignant or putrid fever caused by the emanations from animal matter, sometimes mixed with vegetable matter in a state of decomposition, varies in its characters with the causes producing it; as in the instances to which I have adverted. If the emanation from the dead proceeds in a very concentrated form, and is inhaled by a healthy person, it will affect the frame through the medium of the lungs and the circulating fluids, and the person may die in a very short period; this very malignant form of fever

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not materially perverting at the same time the mental faculties; but even in an early stage in typhus the mental manifestations are overpowered, and are entirely annihilated long before dissolution. Again, if in connexion with emanations into the atmosphere, the individual drinks water that is imbued with animal matter, the character of the fever will be then changed; it will then present, in connexion with more or less disposition to putridity, or, in other words, to dissolution of the fluids and the soft solids of the body, marked disorders at the same time of the stomach and bowels, giving an enteric or a dysenteric character, or a gastric form to the malady. We say that the fever possesses an enteric, dysenteric, or gastric character, when, in connexion with a general disturbance of the functions of the body, those organs are particularly affected; and this morbific matter taken into the first passages, will affect those more prominently than others.

2669. The question first put to you was suggested by the Report of the Medical Committee of King's College Hospital, received by the Committee on the 25th of April. It proceeds to state that that committee expressed their decided dissent from the opinion to which your attention was last called. "They consider that typhus fever, like small-pox, is a disease propagated by contagion, or, in other words, is produced by a specific poison generated in the body of a person affected with the disease, and nowhere else; and that, consequently, the primary sources of infection are the living, and not the dead." Do you concur in that opinion?—I concur in it to a certain extent; I believe we all have the opinion that true typhus fever is a disease arising from emanation from a number of individuals shut up in an ill-ventilated room, labouring under disease. When once there is an individual labouring under that disease, it will affect others if they are predisposed to it, or a substance such as woollen clothes, capable of imbibing the emanations and retaining them, will convey the affection to others; but the malignant or putrid fever, which has been called typhoid by some writers, in consequence of the close resemblance to typhus fever, in many of its features, varies from it in one particular, and resembles it in another particular. It has been supposed that, in reference to malignant fever, arising from emanations from the dead, if a number of individuals so infected were put into a close or ill-ventilated ward or room, the fever that would be propagated from those individuals might assume the character of typhus; but that is a *questio vexata* among medical men. Some think that the fever thus propagated will not present the true typhus character; others believe that it will. There have been facts, however, that have occurred, and facts on record, and which I could refer to, in which individuals have been, as it were, almost struck down by the effluvia proceeding from opening the graves of individuals in a certain stage of decomposition; and foul air let out suddenly —a gush of foul air may produce a fatal effect within eight-and-forty hours.

2670. *Chairman.*] Are you aware of the circumstance that drinking the water of the River Hooghly, which is impregnated by the dead bodies thrown into the Ganges, produces the fevers to which you have alluded?—I have read of the circumstance that the waters which have been thus contaminated in the Rivers Ganges and Hooghly, have been productive of dysentery and putrid fever.

2671. Colonel *Fox.*] Has any such fact come under your knowledge in the rivers you have known abroad?—The circumstances that have come under my observation have been of a mixed cause, the admixture of animal and vegetable matter, in river water and marsh water, and tank water; I have met with numerous instances of the injurious effects of these. The substance of what I have stated here has been published some years ago in a work treating of endemic and epidemic diseases; I only state what has been known to the profession for some years.

2672. Has not intermittent fever latterly disappeared from London, and have not typhoid fever or other low fevers occupied its place?—Agues have disappeared from London very generally; still there are occasionally cases of ague in the vicinity of London, more especially towards Blackwall and the banks of the river, and on the other side of the river, where there are the exhalations from the low grounds, from the foul air arising from the decomposition of vegetable matter, and probably from an admixture also of animal matter. This matter is well recognised in the profession: if you have vegetable matter in a state of

Dr. *J. Copland*, M. D.

27 April 1842.

decay even when concentrated, it will produce only a remittent or intermittent fever; but if the vegetable matter contain an admixture of animal matter in a state of decay, the fever becomes more virulent, it assumes a more malignant and putrid character, and the danger is greatly heightened. The fever changes its character—it changes from a remittent to a continued form; or if it still possesses the remittent character, it possesses it in connexion with very decided symptoms of malignity or putridity; as in the Tropics I have seen individuals thus affected with their mental faculties perfectly serene, yet the body almost in a state of dissolution before life had departed from it.

2673. Lord *Mahon.*] In the event of cemeteries being established in London to replace the present grave-yards, within what distance would you think they might safely place them from any inhabited quarter?—I think that three or four miles is quite near enough; there should be none nearer than two miles; but the members of the Committee will judge of this better when they recollect how rapidly London is walking out of town; we may have a hundred years hence some of those cemeteries almost in London. I have always thought of Sir Hugh Myddleton as the greatest benefactor to the City of London and humanity in general from his spirit and humanity and perseverance in conveying water from so great a distance to supply the inhabitants of London; that has been a great cause of diminishing disease in the metropolis.

2674. Should you consider a regulation advisable prescribing the depth at which interments should take place?—I think that would be advisable to a certain extent.

2675. Have you considered what depth would be advisable as diminishing the effect of the effluvia?—I have not considered that; it would depend in a great measure on the depth to which the soil is at present loaded with animal matter; in proportion as the soil becomes richer in animal matter, the depth should increase.

2676. Colonel *Fox.*] Do you think it advisable to make any legislative enactment, that a certain quantity of quick-lime should be put into the coffin, or if not into the coffin, around the coffin?—That would be beneficial, I think; I think that would be advisable to certain extent.

2677. Are you aware whether there would be among the poorer and middle classes a great repugnance to that practice?—I do not think that would be material; the use of chloride of lime would be of service.

2678. Would there be any prejudice, do you think, among the middle and lower classes to the use of any substance to decompose the body?—I can scarcely give an opinion upon that subject, but I think the opposition would be slight.

2679. Near Naples, there are 365 vaults, one open each day of the year, and the paupers that die that day are placed there, with a quantity of quick-lime; that same vault is again opened on the same day of the year following; do you think such a system, having four large grave-yards on such a system, on the four sides of London, at some distance, would be advisable?—I think it would, to a certain extent; it would diminish the evil.

2680. Lord *Mahon.*] Are you aware that the bodies of individuals who have died on the same day are tossed in together into the same vault, without any clothing?—I am not aware of that circumstance.

2681. Sir *R. H. Inglis.*] Do you think it would be desirable to prevent dead bodies being interred within a certain distance of the surface?—They ought not to be interred within six or seven feet of the surface.

Jordan Roche Lynch, Esquire, M.D., Member of the College of Surgeons, Examined.

Dr. *Lynch*, M.D.

2682. *Chairman.*] YOU are aware of the object of this Committee; will you have the kindness to state generally your sentiments on the injury to the community arising from interments in large towns?—I have heard the evidence of Dr. Copland with great pleasure; as far as my experience goes, as well as reading, I perfectly agree with him in all he has said. Of the primary operating causes of my own locality, I can speak more particularly.

2683. Where do you reside?—King-street, Snow-hill; I am medical officer to the West London Union. There are a great number of poor, and a great number of courts and alleys, *cul de sacs*; the poor are always suffering under typhus fever; I have

Dr. *Lynch.*

27 April 1842.

I have made out the history of hundreds; I have their names, ages, and every particular connected with them. We have a refuge to which the casual poor of the metropolis resort at night; we see them under all circumstances, the very humblest classes; they are in a state of terrible misery; I have had a great number of those labouring under typhus fever. Having directed my attention the last 10 or 12 years to that, I have taken the trouble to trace it to its fountain head, and have always been able to trace it to a precise origin, namely, the decomposition of vegetable and animal matter. I suppose it is well known that terrestrial miasma, or marsh miasma, can produce ague; I believe, from the evidence Dr. Copland has given, it is equally clear that the decomposition of animal and vegetable matter will produce typhus fever. A great number of my patients reside on the banks of old Fleet-ditch, that is a locality from which fever is never absent, and it is always of a malignant typhoid character; cholera showed itself there during its visit to London more particularly than in any other locality. There is a churchyard in St. Bartholomew's (I attend both parishes), you might visit the neighbourhood 500 times and not be aware of this churchyard; it runs parallel with a narrow court; the churchyard is not more than 10 feet wide by about 45 or 50 feet long; it is impacted or stuffed, crammed with dead bodies. One of the parochial authorities complained that it had been three times filled, to his own recollection; it is the receptacle of the pauper part of the population. I should also mention that there are two other burial-grounds in this parish, Bartholomew-the-Great and Bartholomew-the-Less; the better part of society are buried there, but there is not room, nor has there been for some time, as the same parochial authority told me, for a single body. I remarked to him that I had recently received orders from the relieving officer to go to those courts approximating or abutting on this pauper burial-ground. I wished to go over it; I have been over it, and I find all the back rooms jutting over this ground having the cesspools, and the ash-holes, and privies floating over in this court. I should state, as was given in evidence by our relieving officer, when we go up to see a patient we have to pick our steps through the excrementitious matter flowing down; the persons living in this part of the metropolis are in the habit of emptying their chamber pots into this churchyard, and the smell is horrible. I have found that disease showing itself in that locality, as well as on the banks of the Fleet-ditch, which is always surcharged with excrementitious soil; it is always of a malignant character, and if a person is attacked with mild disease originally, it assumes a more malignant form, and we have a greater difficulty in curing it; and if a patient is attacked there with typhus, I have no hope of curing it unless I have the patient removed into the workhouse to get the benefit of good ventilation. I have seen on the banks of this Fleet-ditch, young ruddy-complexioned persons fresh from the country, you would fancy they had strength of constitution to set this infectious agency at defiance; but let them be a short time in this locality, they become the victims of this disease, and eventually they become burdens upon our parish; the gradually inhaling this atmosphere affects them, undermines a sound constitution, and though they have at first a power of conservatism of constitution to resist the contagion, they become predisposed to it and affected by it, and in many instances destroyed. The water draining through a churchyard becomes imbued with animal matter, and is so far deleterious, I have no question about that; practical chemists have satisfied us that the water of the marshes, when they have analyzed it, has been found to contain putrescive matter, and it is beyond supposition, it has been proved by experiments by Monsieur Gaspard, and by Monsieur Guerin and M. Majendie; I should state that though this as a general principle is correct throughout the country, as far as my own knowledge goes, the supply of the water is good to our localities, and that cannot be complained of. The great primary cause is, that the privies are in general under the staircase of the wretched hovels of the poor, and the sulphureted hydrogen, and the carbonated hydrogen, and the noxious gases there generated, are the same gases as are generated from the dead bodies in a state of decomposition, for the evacuations from the body is decomposed animal and vegetable matter, and a dead body is the same, it is decomposition of the dead body, or a general state of disorganization, and that produces exactly the same kind of gases. There have been instances mentioned, where people have fallen down dead from a rush of those gases in a concentrated form. I have not witnessed a case of that, but in those localities minor diseases have become

Dr. *Lynch.*

27 April 1842.

aggravated in their intensity; I have known them complain of head-ache, and sickness at the stomach, and a coppery taste in the mouth and throat, and I and my assistant know it very well, from our noses, the stench instantly felt is very repugnant, and instinct tells us it cannot be wholesome. I think that when the air is impregnated with this nauseous effluvium, which is invisible, it is well that we are furnished with the organ of smelling, the brain, the heart, and the lungs, being all in the same neighbourhood, and we should attend to its monitions; the same remark has been made by my colleague, as myself and my assistant; we know the symptoms of the dead damp; it is a peculiar, indescribable smell, and any gentleman coming up Parliament-street may have remarked it; we had the same smell yesterday, and the same to-day; and when I had got a quarter of a mile from this place, coming along Parliament-street, a certain state of the wind will bring it palpable to the nose; I experienced that yesterday, and to-day.

2684. Lord *Ashley.*] From whence did the stench come?—From the churchyards. A gentleman walking five or six yards may not perceive it; but if he walks the whole distance, he will become conscious of it, and he will never forget it. I have heard it stated that typhus fever can only arise from a living body, or from animal exhalations arising from a living body. In the many instances I have alluded to it, it arose from the putrid emanations of decaying animal or vegetable matter.

2685. Colonel *Fox.*] Is this noxious smell worse at night or in the daytime?—I think at this hour of the day, when the heat of the sun is most strong, and when the gases or emanations are attracted by its power, it is stronger than any other time. I can state as a fact, that I have been consulted by, and I can mention the name of the wife of a distinguished anatomist, within these last three months. She has, within the last six years, had typhus fever six successive times. The reason that I assign for it is this: in the two parlours of the house in which she resides there are always one or two bodies; it is an anatomical theatre, and in the front or back parlour there are always dead bodies; and though I have been used to smells of all descriptions, and have acquired a kind of disregard of them, I have been obliged, on going into that house, to hold my nose. I have been once or twice invited to dinner; I run off as fast as possible; I have got my dinner, or rather I could not eat from the stench. The professor has himself told me that no servant will ever remain in his house more than a fortnight; it is an extraordinary thing if he keeps them more than a fortnight. I think it shows their good sense.

2686. How is his own health?—He has been on the verge of the tomb; he was last summer obliged to go down to Margate and remain there for months.

2687. Lord *Mahon.*] What is the health of his family?—He has no children; his wife has been affected with typhus fever six times. In dissecting myself at La Pitié, at Paris, I had the same complaint that young students often complain of, viz. diarrhœa in the first instance, and after I got better I had typhus fever itself, which I attribute to the noxious exhalations of the dead bodies. I had a cousin, a member of the Royal College of Surgeons in Ireland, three times he was attacked with typhus fever, and by repeated attacks the system was so altered, he had a malignant carbuncle, and with the greatest difficulty his life was saved. Putrescent animal matter will produce typhus fever, as has been mentioned by Dr. Copland; not only has Hippocrates stated that, but every great medical authority from before the birth of Christ to the present time. The celebrated Dr. Cheyne, Dr. Percival, Dr. Armstrong of the present day, Dr. Southwood Smith, Dr. Roupell, Dr. Elliotson, Dr. Lewis, Dr. Tweedie, Dr. Stephens, Dr. Clanny, of Sunderland, and 30 medical practitioners in daily attendance on those affected with disease, were examined before the former Committee on the Health of Towns; they all agreed on the origin of this disease, referring it distinctly to putrid animal matter. I have noticed, having specially directed my attention to it, that the way they become affected is, that they breathe or inhale an atmosphere surcharged or impregnated with those deleterious matters, which are not visible by the eye, into the lungs; they mix with the blood and affect the whole frame. Proceeding on that opinion, I have opened the arms of all those people supposed to have typhus fever, or subject to it, and have invariably found that the circulation of the blood and its chemical composition is altered, and becomes quite dark and carbonaceous, and if you preserve it in a glass for any length of time, and let it remain quiescent, putrid and foul smell gases will be developed from

Dr. *Lynch.*

27 April 1842.

from the chemical change which goes on, the same gases as proceed from a grave.

2688. Colonel *Fox.*] Will not that be the case with any blood preserved in a glass?—No, not in so short a space of time. I should state that at the church in my own neighbourhood, St. Sepulchre's for instance, the parish church, the side vaults in that church are all well constructed, there is a good ventilation to them, and the consequence is that they are free from any taint or atmospheric impurity, but the centre vault, over which the congregation meet at divine service, is full of bodies. The reason I dwell upon this circumstance is, that though there are hundreds of bodies in this vault, and though it is excavated to a considerable depth, having on the western side an opening, and on the east another, which admit of a thorough ventilation, that has so neutralized the effluvia, when I was there yesterday evening it was as sweet as any gentleman's wine cellar. When effluvium escapes into the atmosphere it becomes diluted, and is almost deprived of its power of contamination. There is a church on Ludgate Hill where they have departed from a very proper regulation, of requiring the bodies to be buried in lead, and admit wooden coffins; the consequence is there is no impediment to the evaporation of the noxious emanation, and the smell on the Sabbath-day at times is awful; it is quite perceptible to any one who enters the church; the consequence is that the church is very little attended.

2689. What is the church to which you refer?—I refer to St. Martin's, Ludgate Hill. There is another church, St. Andrew's, Holborn, on the acclivity of the hill; from the surface of the ground it is about 14 feet, and that elevation is formed, I may say safely, of the bodies and bones and skeletons, with a surface of four or five feet. It is built up, quite an artificial construction, a catacomb above the earth. It is so full, they have lately provided very spacious burying-grounds in Gray's Inn Road. The vaults under that church are very well ventilated; they are formed on arches.

2690. Still the miasma escapes?—Yes. I can give the name of the place where this gentleman went to whom Dr. Copland referred, in Fetter-lane, a Baptist meeting-house, a very small building, and the bodies are close under the floor in which the people are sitting; they are crowded there, and it is in a most disgusting state. Being in my neighbourhood, I have attended many of the flock; I have forewarned them not to go there. I have gone there myself, and felt the effluvia, and have known females who are very attentive to their duties there suffer from the effects of it; and not only they suffer, but in the courts in the neighbourhood they have been labouring under a character of disease that I believe to arise from malarious influence.

2691. *Chairman.*] You confirm Dr. Copland's observation, that ague is produced by vegetable decomposition, and typhus fever by an admixture of vegetable and animal substance together?—Yes.

2692. Ague has diminished in the town, but typhus has increased?—Yes.

2693. Is it a fair conclusion, that a greater quantity of animal matter has been mixed with the atmosphere than formerly?—The population has increased and accommodation has not increased; in the same proportion animal evacuations must have been augmented; the liability to the living is manifest. I believe that if those crowded churchyards were removed, if better tenements, more airy and better ventilated, were provided for the poor, and if the privies were attended to, typhus fever might be as rare as a case of plague is now. With sanatory regulations like these it might be unknown in the metropolis.

2694. And an immense loss of life prevented?—Yes, and the poor-rates greatly diminished. When a poor man dies his wife and family come into the workhouse, and become burdensome for years. Those are the results of my own individual experience. Baron Humboldt, who came over with the King of Prussia, mentions in his work on South America, that at Porto Bello and Carthagena they indiscriminately bury the dead, and here and there trees are felled and allowed to remain with a vegetable decomposition going on; the consequence is, in a warm climate, the rays of the sun falling on this decomposition produce disease, and great numbers die; but at some seasons, when the sea flows over this marshy ground, and there is a saline deposit, it counteracts the effect: it exercises an antiseptic property over those animal and vegetable exhalations.

2695. You consider that bringing the water by pipes from the country into the town, and preventing individuals drinking the water which has percolated through the churchyards, has been beneficial to the health of the country?—As another

Dr. *Lynch.*

27 April 1842.

another proof of that, I was at Paris when the cholera broke out there, and thousands fell victims to it. I recollect that the carriers of water were affected, the water being foul, and it always exhibited the malignant dysenteric character to which I have referred; and that may explain the reason why so many more thousands died at Paris of that disease, though with a smaller population, than in London.

2696. Colonel *Fox.*] With regard to the water, have you a knowledge of any wells that you consider decidedly unwholesome?—No; I do not know more than one or two wells; those wells are wholesome; they are on the principle of Artesian wells; in the carriers' offices, Pickford's, and so on, the large waggon offices.

2697. *Chairman.*] They are not in the vicinity of churchyards?—No.

2698. Colonel *Fox.*] Have you seen the insects which are said to generate in the churchyards?—Yes; a black insect something like a flea; that is from decomposed animal and vegetable matter.

2699. Have you seen those in St. Bartholomew's churchyard?—I have; they are generally found outside the tombs. In conversing with the grave-diggers, they have acknowledged to me that they have all been more or less affected by the miasma of the grave; and in our own parish the two preceding grave-diggers were very seriously affected; the present is a very hale, strong man, and is able to resist its influence.

2700. Mr. *Vernon.*] You do not consider that any mischief arises to the community from the existence of that black fly to which you have referred?—I am not aware of any.

The Rev. *Evan James*, called in; and Examined.

Rev. *Evan James.*

2701. *Chairman.*] WHERE do you reside?—I am Curate of St. Dunstan's, Stepney.

2702. You are aware of the object of the Committee; will you have the goodness to make any statement bearing on the question before them?—I am perfectly unprepared; I really had forgotten that there was such a Committee in existence; I make no pretensions to any theory, based on any supposed principles of science; I can only answer such questions as may be put to me, I having been for many years the curate of a very populous parish, and such things as may have occurred during that time I am ready to state, if the Committee shall be pleased to state to what facts they wish me to refer.

2703. Lord *Mahon.*] It has been stated to this Committee, in reference to the general effect on the health of large towns, that injurious consequences result from interments in grave-yards in very populous places; is that in conformity with your own observation and experience?—I can give no opinion except as regards my own parish. The neighbourhood in which I live is not very populous, but I reside near a churchyard where more dead bodies have been interred probably than in any other churchyard.

2704. Is it St. Dunstan's, Stepney, to which you refer?—Yes; perhaps more dead bodies have been buried in that churchyard than in any other in the kingdom. During the plague, in 1665, there were upwards of 150 buried in a day. There are fewer persons interred in Stepney churchyard now than there have been for the last 200 years.

2705. What is now the average number of burials?—They have diminished very much within the last six or seven years; the number last year did not exceed 400, whereas they used to average 700 a year for many years after I was at Stepney.

2706. Probably the circumstances of the parish of Stepney are not such as would exemplify, in any strong degree, the evils supposed to result from interments?—There have been many private cemeteries established of late years in that neighbourhood. Mr. Barber Beaumont established a cemetery at Stepney about five or six years ago, and I believe they bury there to the number of 1,000 a year.

2707. Sir *William Clay.*] Since what time is it that the average number of burials in Stepney burial-ground has decreased?—They have gradually decreased since I have been there; when I first came there, they averaged 700 a year; they have been diminishing gradually from 1825. There have been three

three or four extensive burial-grounds opened in the parish during that time, one of which is in Globe-lane, and in the hands of an undertaker, I believe.

2708. How many years since is it that you commenced your duties as curate of that parish?—I commenced my duties in the month of July 1815.

2709. For how many years did the average number of burials per year amount to 700?—They continued till about the end of the year 1825; since the opening of the Globe-lane burial-ground they have gradually diminished.

2710. Was the number of 700 burials per year, in your opinion, much greater than the churchyard of Stepney could properly or decently admit?—I should say that Stepney churchyard contains perhaps upwards of three acres of ground; it is a very extensive ground, and there are some parts of that burial-ground which have not yet been touched.

2711. During the period you have been referring to, when there were 700 bodies buried in the course of a year, were there any circumstances you can state to the Committee, either as affecting public decency or public health, arising from the circumstance of that number of burials?—I can safely state that I have never found anything of the kind.

2712. How many coffins were placed in one grave, to your knowledge?—I have never known more than two.

2713. What is the general depth of the graves?—Generally they cannot dig deep there; they would come to water. There is an improvement in the drainage of late years, which makes it something dryer, but they could not dig more than seven or eight feet.

2714. Have you never known more than two coffins put into one grave?—No, not at one time; they have been filled over and over again, I dare say; but then the original bodies have been decomposed, and mixed with their kindred dust.

2715. Was there any regulation as to the proximity of a new grave to an old one?—No.

2716. Are you aware whether in digging a new grave they have disinterred any coffins and bodies?—I have known when a person has been exceedingly desirous of interring his friend in the same grave with another friend or kinsman, that a child which had been buried has been taken up to make room for the father and mother. I never allowed them to do that, unless it was done very decently; that is to say, they would take it up and put it on one side and cover it, not to make it offensive to the public in any way.

2717. You have never been aware when you have been attending funerals of any offensive smell?—No.

2718. No circumstances occur to your recollection connected with burials in that churchyard which you consider offensive, on the ground of public health or decency?—No, certainly not; it is not long since I buried a man at Stepney who had been upwards of 70 years the grave-digger; he died in the 103d year of his age.

2719. Colonel *Fox.*] Is there an endowment in St. Dunstan's?—There is.

2720. Have the fees, in consequence of the cemeteries you mention, been considerably diminished?—Most seriously.

2721. How much do you suppose the incumbent has lost by the opening of those cemeteries?—Speaking generally, quite unprepared, I should say he has lost by the opening of those cemeteries in the parish at least 300*l.* a year.

2722. Can you suggest any way by which, in the event of public cemeteries being made by law in the neighbourhood of London, compensation could be given to the different clergymen affected thereby?—I cannot.

2723. Do you yourself, though you never witnessed anything improper in this churchyard, think that large cemeteries on each of the four sides of London would be a great advantage?—If I am asked generally with regard to the city of London, I should say decidedly; but as regards the parish of Stepney, I think not. The college of Brazennose have offered the parish a piece of glebe of upwards of an acre, and if that were added to the churchyard, I conceive the churchyard at Stepney would still answer all the purposes of a churchyard for the parishioners.

2724. You have no feeling professionally that the interment of the dead should be near the church or under the church?—No, I have none, certainly.

2725. Mr. *Ainsworth.*] Is not there a pump in Stepney churchyard?—There is.

Rev. *Evan James.*

27 April 1842.

2726. Is the water from that pump good?—That I cannot say, but I know it has been very much used by the inhabitants.

2727. Have you ever tasted it yourself?—They sometimes bring water into the vestry-room; I have requested them not to bring it from that pump; but I have reason to suppose I have tasted it, and if I have tasted it, I certainly did not discover anything exceedingly offensive in it.

Veneris, 29° die Aprilis, 1842.

MEMBERS PRESENT.

Colonel Acton.	Mr. Kemble.
Mr. Ainsworth.	Lord Mahon.
Mr. E. Denison.	Mr. H. Vernon.
Colonel Fox.	Mr. Yorke.

W. A. MACKINNON, Esq. IN THE CHAIR.

The Rev. *Henry H. Milman,* Rector of Saint Margaret's, Westminster, called in; and Examined.

Rev. *H. H. Milman.*

29 April 1842.

2728. *Chairman.*] YOU are aware of the object for which this Committee has been appointed; will you have the goodness to state your opinion; first, as regards the question of legislation; secondly, in what way the remedies can be applied so as not to interfere with vested rights; and, thirdly, as to how far the nuisance itself exists?—It appears to me that the only course that could be adopted would be to have a great number of large burying grounds in convenient situations, in which the different parishes might inter their poorer inhabitants; for I would consider the question as regards St. Margaret's and St. John's (which is connected with it), in the first instance, with reference to the interment of the poor. If it is determined by the Legislature to discontinue interments altogether within the towns, the plan then would be, I should conceive, to have public cemeteries to which all those interments may be removed; and I conceive that the principle which has generally been applied in the cemetery Bills which have hitherto passed, in which there has been a certain reservation of rights to the clergy and to persons interested, might be applied to these. Then the most important question, as appears to me, affecting the poor, is the expense of interment. It would be very undesirable for the Legislature, in my opinion, to adopt any measure that would increase that which in itself is, to a certain degree, a heavy expense upon the poor inhabitants of the metropolis. I cannot but think that by some well-regulated scheme, by a conveyance being provided under parochial regulations, or some regulation laid down generally for the metropolis, the bodies might be conveyed to a certain distance, say two or three miles, with very little more expense by horses and carriages, than upon men's shoulders, as they usually are at present, for a distance of two or three streets. It seems to me, that conveyed as living persons are at so small an expense from one part of the town to another, the bodies of the dead and mourners might, provided there were some general system adopted by the parishes, be conveyed to that distance without any increased expense; but then that would require a scheme well considered and well digested, and it would require of course that there should be a certain number of cemeteries conveniently situated as respects each parish, one or more parishes might agree in having a common cemetery, or if parishes are very large, they might have their own; that would certainly involve parishes in the first instance in very considerable expense.

2729. It appears that there are three sources of expense which would be incurred by any change, one would be the expense of purchasing land; the next would be the fees to the clergy and to the parties who belong to the Church; and the third would be the additional expense of conveying the paupers to their last home. How would you suggest that that expense should be

Rev. *H. H. Milman.*

29 April 1842.

be covered?—I conceive that if there is any general legislative measure, prohibiting interments in large towns, there are only two sources from which the first expense could be provided, either from the national funds cemeteries must be procured by the public, or that tax must be laid upon the parishes, which in many cases I conceive might be unwelcome, and encounter considerable opposition.

2730. Do you suppose that an additional rate of a penny in the pound would cover the expense to which I have alluded?—That would depend upon the rental of the parishes and the price of the ground. I would rather give no opinion upon that.

2731. In the event of any legislative enactment taking place, in whom would you think it advisable to vest the authority, in the parishes, or the Unions of parishes, for carrying the purposes of the Act into execution?—I should conceive that the clergy, and the parochial authorities, would be the best parties.

2732. By the parochial authorities you mean the incumbents, rectors or vicars, the churchwardens, and some portion of the vestry?—I should conceive so, that which is conceived to be a fair representation of the parish.

2733. Do you consider, in the event of any legislative enactment taking place, it would be a desirable thing to have unions of parishes for the purpose of interment, as you have Unions now for the purpose of relieving the poor?—I should conceive, in the smaller parishes, particularly in the city, that would be the case; but as far as St. Margaret's or St. John's are concerned, which have above 50,000 inhabitants, either together or singly, if they retain their present union, which they do for all parochial purposes, they would be quite large enough for any ordinary cemetery.

2734. With regard to any legislative enactment for preventing interment under churches or chapels, do you think that would be desirable?—I am not aware of any evil being produced by that, because in general I believe the vaults are so well secured (with reference to St. Margaret's, I am sure that is the case), and that they occur so rarely on account of the fees being heavy, that I do not conceive that any evil arises from that.

2735. Generally speaking, do you conceive that there is any evil arising from it, so far as it comes within your knowledge?—I should say, none whatever.

2736. Mr. *Vernon.*] Are you not aware that a canon of the church was pointed againt the practice?—There are some early canons of the church against it.

2737. An abuse having existed on that subject, and injury having been conceived to arise, a council directed some prohibition to the clergy upon that subject; is not that so?—I really must consider, it is a question of ecclesiastical antiquity.

2738. *Chairman.*] You are aware that in the early ages of Christianity burying in churches was not allowed; that it first began under Constantine?—Yes, no doubt of that.

2739. As a favour for his support of Christianity he was allowed to be buried in the church?—Yes; that was the first interment in a church, or rather the atrium or porch of the church; but there may have been other good reasons, viz. that the churches probably were, till a very short time previous to Constantine, so small that you could scarcely have so used them; and burial in cities was prohibited by the Roman law.

2740. You are aware that subsequently, in the dark and middle ages, the custom became very general, and that within the last century in most parts of civilised Europe, it has been prohibited?—Yes; in a great portion of the large capitals of Europe, I am aware that it has been prohibited.

2741. Mr. *Vernon.*] Do you not believe that the practice of burying within the church originated, and was promoted greatly by a superstitious opinion in respect to the security of the soul of the departed?—I have no doubt whatever of that.

2742. *Chairman.*] You are aware that many nations on the Continent, within the last 50 years, have had an impression that that was injurious, and that it has been prohibited by their legislative enactments?—Certainly; large catacombs, like those of Paris, have been formed in different large cities of Europe; it has strictly been prohibited, and those catacombs, or other cemeteries, have been provided. I should conceive, however, that the climate would have a great influence with regard to health. I should conceive that

Rev. *H. H. Milman.*

29 April 1842.

particularly in the mode of interment in southern countries, the effect upon health would be more likely to be noxious than it would be in our country.

2743. Are you not aware that it is not dry heat so much as damp, that causes putrefaction; for example, in Egypt, you are aware, that bodies do not putrify so rapidly as in some other countries?—Yes, that I am perfectly aware of.

2744. In reference to the churchyard of St. Margaret's, is that full or not?—It is very full.

2745. Can you with convenience inter there?—My own opinion is that interment ought to be discontinued there for several reasons; not because I have ever heard of any noxious effect upon the health of the neighbourhood, but on account of its public situation; it is a thoroughfare, and in point of fact it has been a cemetery so long, and it is so crowded, that interment cannot take place without interfering with previous interments.

2746. Then your opinion agrees with this statement: "The commissioners, for the improvements in Westminster, reported to Parliament in 1814, that St. Margaret's churchyard could not consistently, with the health of the neighbourhood, be used much longer as a burying-ground, for that it was with the greatest difficulty a vacant place could at any time be found for strangers. The family graves generally would not admit of more than one interment, and many of them were then, in the year 1814, too full for the reception of any member of the family to which they belonged?"—I confirm that; but I state that I have never been able to trace any noxious effect upon the neighbourhood; but I would remind the Committee of the peculiar situation of this churchyard, that it is at no great distance from the river; and it is perfectly well known, that in the neighbourhood of a tidal river, the air is changed twice a day, and it is probably a corrective of any kind of effluvia, and dissipates it before it becomes noxious to the neighbourhood.

2747. Mr. *Ainsworth.*] What is the number of your interments weekly?—They have diminished very considerably; the more opulent have in general removed their interments to the cemeteries; and there have been certain other reasons.

2748. Where are the poor in general interred?—They are generally interred in the Broadway churchyard.

2749. Is not that equally full?—It is not equally full, but it is certainly full; but the chapel in which the service usually took place having been removed, and it being rumoured that a new street was to go over the churchyard, there was an impression that it was likely to be desecrated and turned to other purposes, which created a feeling against it, and many persons, who would otherwise have interred their dead in that churchyard, have been induced to remove them to other places.

2750. That applies to the Broadway?—Yes; but the Broadway I consider a crowded churchyard.

2751. Lord *Mahon.*] In the event of a prohibition by the Legislature of any further interments within the present grave-yards in London, do you apprehend that great pain would result to the feelings of many persons who might wish to be interred by the side of their deceased relatives in those grave-yards?—I think, in some instances, that would be the case.

2752. Would not those cases be confined in a great measure to the more affluent classes?—I should say not; there is a very strong desire among the lower classes that their remains should repose near those of their relatives.

2753. Would the object be answered almost as effectually by prohibiting interment in the existing grave-yards, without the payment of a double or a treble burial fee, so as to admit of it only in cases where a strong feeling might exist?—I think it would be hard to extort as it were a larger payment from a feeling of that kind; it would be hard upon persons to tax them for entertaining that which is a natural feeling.

2754. But would you prefer a positive prohibition in all cases, or a permission, as has been alluded to, which probably would be very rare?—My own opinion would be strongly against a clause of that kind, as unfair.

2755. You would prefer a total prohibition?—I think, if there were a prohibition, the prohibition should be general.

2756. Mr. *Vernon.*] At the same time, you are in the habit of compelling a much

a much larger fee for specific appropriated burying-places, in the nature of vaults?—That proceeds upon the principle of a more permanent occupation.

2757. Does it not proceed upon the principle of securing to the parties the preference of being buried in the vicinity of their own kin?—Certainly.

2758. Then, that preference may be purchased at the present moment for a larger fee?—Certainly; but I am speaking very disinterestedly, for it so happens that the parish of St. Margaret's obtain the whole of those fees.

2759. Mr. *Kemble.*] You have held the living of St. Mary's, in Reading?—I have.

2760. How long were you incumbent of that parish?—About 17 years.

2761. Is not the churchyard there very large?—Not very large; but an additional churchyard has since been obtained for that parish.

2762. Are there not two or three footpaths across that churchyard?—Yes.

2763. Did not you reside near the churchyard?—Yes, the access to the house was through part of the churchyard.

2764. Did you yourself or your family experience any inconvenience from your residing so near the churchyard, during the 17 years you were there?—None whatever.

2765. Lord *Mahon.*] Did the rectory-house closely adjoin the churchyard?—It was in the churchyard; it was only approached by the carriage-way through the churchyard.

2766. *Chairman.*] Was the churchyard open for the dead?—Yes; it was the regular churchyard of the parish. But I may state, in answer to that question, that the churchyard being full, an additional churchyard has been provided.

2767. Mr. *Yorke.*] Was the new churchyard established while you were there?—No, it was established since.

2768. *Chairman.*] Was it established in consequence of the fullness of the churchyard?—Yes; but I would remark that the increase of the population of the parish would itself have required that additional churchyard. The population of the parish has doubled.

2769. Mr. *Vernon.*] Was the churchyard in a well-ventilated situation?—Certainly.

2770. *Chairman.*] It was very open?—There were streets all round it, but it was open, and rather high.

2771. Were there buildings all round it, so as to enclose it?—On one side there were houses actually with their backs in the churchyard; on the other side there was a railing, and the houses were the width of the street from the churchyard.

2772. Then it was an airy situation?—Yes.

2773. Lord *Mahon.*] Do you recollect what the amount of the population of Reading was?—At the last census, not that of 1841, it was between 15,000 and 16,000.

2774. Supposing cemeteries to be constructed at the distance of three or four miles from London, should you imagine that the expense of funerals to the poor would be increased?—I cannot but think, that by a well-regulated scheme, they might be conducted without any increased expense.

2775. Mr. *Kemble.*] When you resided at Reading did you find the water good?—Excellent.

2776. *Chairman.*] You did not find anything noxious in the water coming through the churchyard?—We had our own well; it was excellent water.

2776*. What was the sub-stratum?—Gravel.

2777. Lord *Mahon.*] Do you think it would be a desirable thing, in the event of cemeteries being constructed, that the parochial authorities should still be responsible for the decent performance of burial, and should receive the burial fees, as they do at present?—It would depend very much upon the number of the cemeteries, whether any delegated control from the different parishes which might occupy a single cemetery should exist; that is a question of detail.

2778. Has any better mode occurred to you in which the vested rights of the clergy and other parochial authorities as connected with the burials might be secured?—No; I can suggest no other.

2779. Does the mode I have suggested appear to you to be free from objection?—I think the question would be with regard to the size of the different parishes that might contribute; there might be conflicting views; and with

Rev. *H. H. Milman.*

29 April 1842.

regard to the small parishes that might contribute to one large cemetery, you would be obliged to delegate a certain number of persons.

2780. Would not the rule then be that the incumbent of each parish should receive the burial fees for the burials from his own parish?—Unquestionably; but I thought the question to be with regard to the maintenance of the ground and the due performance of the ceremony.

2781. The main object of the question was to obtain some information for the Committee as to the mode of securing, in any change that might be adopted, a due respect for the vested rights and incomes of existing authorities. In that point of view would there be any difficulty in the course I have stated?—I think an arrangement on that basis might be framed, but that it would vary very much according to the conditions of the different parishes; there is no uniform system of fees at present through the metropolis; it varies according to the custom of each parish.

2782. Could that variation still be introduced, if it were thought desirable, in those new cemeteries, as applying to the burials from each parish that took place in it?—I think it would materially depend upon the expenses laid upon the parishes; for instance, if the public (by the public meaning the nation) were to furnish those grounds for the metropolis, then there might be a question whether any fees should be reserved but those of the clergy.

2783. Supposing cemeteries to be opened without any such provision, do you apprehend that in many cases considerable loss to existing incomes would ensue?—I am convinced that the emoluments of the clergy of London would be half swept away.

2784. *Chairman.*] Would that be the case with the country parishes?—No, clearly not, for the surplice fees, as they are technically called, in country parishes usually form a very small item; but in London, except in certain cases of endowment, generally speaking the surplice fees, including the fees for ceremonies of all descriptions, form the sole emolument of the clergy.

2785. They have no glebe?—No, except in rare instances.

2786. If a legislative enactment was framed, preserving the existing rights, would the clergy as a body have any objection to it?—I am unwilling to consider myself as representing the sentiments of the clergy in general; but I should conceive that if the Legislature consider that the interment in towns is objectionable, they would be the last to interpose any objection to an alteration of the kind; provided always, that their vested rights, upon which their absolute existence, I may say, depends, were preserved; I do not conceive that there would be any objection on their part.

2787. Mr. *Ainsworth.*] You state that a tax upon the parish of Westminster, for the better interment of the dead, would be objectionable?—I did not state that it would be objectionable; I should state that in these parishes of St. Margaret's and St. John's, a church-rate is of rare occurrence; by some usage which, I confess myself, is questionable, but still a usage which has not recently been contested, the parochial authorities receive not only the whole of the emoluments of the pews of the church, but likewise receive a very large proportion of the fees upon interments, leaving a very small one for the rector. The consequence of that is, that a church-rate occasionally occurs, but is of such rare occurrence as might create something like objection.

2788. But is it not generally admitted that the two churchyards in St. Margaret's are so completely filled, that there is a necessity for something being done?—In my opinion that necessity exists.

2789. Do you think if that were made known to the people of Westminster, they would object?—I cannot say; I hope not; I can only advert to the general unpopularity of certain taxes.

2790. Mr. *Vernon.*] In reference to the emoluments of the clergy as derived from the ceremonies, are there not two classes of fees, the one legal or customary, the other honorary or gratuitous?—Yes; for instance a fee upon a marriage is of course a fee which is regulated according to the ordinary power of payment of the persons, the honorarium is when persons of a certain station are married, who in general give a larger fee than the legal fee.

2791. With respect to funerals, does that distinction occur?—In many parishes I believe it does occur, that is for funerals in vaults, and it occurs in St. Margaret's; but that additional fee is almost entirely taken by the parish.

2792. In

2792. In the event of any such change as has been suggested, in addition to that which might be met with compensation, would the clergy generally suffer any loss from the loss of such honorary fees?—I should be rather unwilling myself to answer that question, which would be answered better by some of the clergy in London, who have larger rights than I myself am at present in possession of; but I believe it to be the case, that what are called vault fees, constitute a large portion of the emoluments of many of the clergy in London.

2793. Generally speaking, in the event of an interment, the clergyman only receives a regular stated fee, whatever the means of the party for whom the funeral is performed?—In St. Margaret's he receives a larger fee for interment in the vaults beneath the church, he receives rather a larger fee for interment in the ground of St. Margaret's; that is, the churchyard of St. Margaret's itself; and a smaller one for interments in the Broadway chapel-yard; but there are many gradations which would only be understood by the printed scale of fees, which I should be happy to furnish to the Committee.

2794. Lord *Mahon.*] In the event of any legislative enactment with regard to the grave-yards of London, should you or not conceive it desirable that any change should be made in respect to Westminster Abbey?—I do not see any necessity whatever for it; it is quite impossible that any effect can be produced by the interments that take place in Westminster Abbey, which are very unfrequent; they are merely marks of distinction to persons who have served their country honourably, or one or two noble families, for instance, the Duke of Northumberland, who has a vault in Westminster Abbey; and the families of the dignitaries of the church of Westminster Abbey.

2795. *Chairman.*] Do not you think that those parties would be equally satisfied if a monument was placed in the Abbey without the body?—I think not; if we look to Nelson's feeling about it we find that it was not so; besides, I cannot conceive that any possible injury can arise from it.

2796. Lord *Mahon.*] In the event, therefore, of any legislative enactment, you would suggest the exception of Westminster Abbey?—Yes, and St. Paul's.

2797. You do not conceive in either case any practical injurious results?—No.

2798. *Chairman.*] Are you aware that the body of Sir Thomas Lawrence is only one foot below the pavement?—I doubt the fact.

2799. Mr. *Yorke.*] Do not you think that the number of persons who obtain interment in Westminster Abbey might be restricted?—I hardly know; our great men are few; and I would state another point, that with regard to all interments, they are exceedingly expensive.

2800. *Chairman.*] What is the fee?—It depends upon circumstances, upon the rank of the person.

2801. Mr. *Yorke.*] Can persons obtain interment in Westminster Abbey by payment of money?—I have known one instance in which it was done by a person of great wealth and of rank, but that is the only one I recollect; and I do not think there have been, excepting some of the families of the dignitaries of the Church, within seven years, more than four or five interments.

2802. Are there not among the monuments in Westminster Abbey a vast number of persons who had no right, by public service or station, to be interred in Westminster Abbey?—There may be some who have monuments; but there are many monuments of persons who are not interred in Westminster Abbey.

2803. *Chairman.*] Is there a fee for the monument, as well as for the body?—Yes, there is a fee for the monument, which I should state, at the same time, is applied to the fabric.

2804. Lord *Mahon.*] Was not the former practice different; has there not been an improved system in that respect?—Certainly, but I should conceive that interments were always very rare; of course there were more interments during the war.

2805. *Chairman.*] The interment and the monument are totally distinct?—Yes.

2806. Mr. *Ainsworth.*] Are there any vaults under the Abbey?—There is a royal vault, and there is a vault of the Duke of Northumberland; and I believe there are other vaults, but those are the only ones that I am aware of existing at present.

Rev. *H. H. Milman.*

29 April 1842.

2807. Mr. *Yorke.*] Are there no vaults below the nave?—There are no vaults, I believe; but there are a number of interments.

2808. That is the portion of the building under which the bodies of great commanders and persons of distinguished merit are interred?—Yes, the nave and the transepts.

The Rev. *John Trevor Robinson*, called in; and Examined.

Rev. *J. T. Robinson.*

2809. *Chairman.*] YOU are aware of the object for which this Committee is assembled; will you have the goodness to state generally to the Committee what your sentiments are upon the subject?—I am not aware from my own experience of any nuisance having arisen, or any noxious effects having been produced upon the health of the population in the vicinity of the burial-grounds. In the parish of St. Andrew's, Holborn, with which I am connected, there seems to be a general approbation expressed of some measure which would put an end to interment in populous places. In the general principle I concur; and nothing better occurs to me as to the way in which it can be carried into effect, than what was stated by Mr. Milman, who preceded me; I mean as to providing cemeteries conveniently for such a purpose. And with regard to the poor, those means might be resorted to for the conveyance, I should think, at the same expense at which it is now done.

2810. You mean to say that the expense would not be much increased, except as regards the purchase of land?—No, I should think not.

2811. It has been imagined that three sources of expense would arise from a new legislative enactment, viz. the purchase of land, the conveyance of the parties, and the remuneration of the clergy. Do you consider that each of those would be a source of expense?—I think each would be a source of expense; but I was speaking of the conveyance of the bodies of the poor who are to be buried; I think that might be done with the same expense as at present.

2812. If new ground was to be purchased, in whom do you think the legal authority ought to be placed?—I think it might be very safely vested in the incumbent and churchwardens. There was a piece of ground purchased 100 years ago for the parish of St. Pancras, of which the churchwardens and the incumbent are the trustees; that is extra-parochial.

2813. Lord *Mahon.*] In the event of any cemeteries being constructed under the authority of an Act of Parliament, within a few miles of London, do you consider that the parochial authorities of each parish should be made responsible for the decent burials of persons from their own parish, and that they should then receive the burial fees upon the same scale as at present?—Then, as I understand the question, I apprehend that the rector would be responsible for the due performance of the religious ceremony, and the churchwardens for the decent interment; I myself, personally, should object to being responsible for any duty, except that which was performed by myself or my own curate. I only speak for myself.

2814. Has any better scheme occurred to you, by which the vested rights and the security of existing incomes might be preserved?—I think it would be better if a compensation was made for the loss which was sustained by the clergy in their incomes, and if they had no further responsibility with regard to the duties of interment.

2815. Would not that be in fact continuing to them the salary, but exempting them from the duty?—If you regard the compensation in the light of salary, certainly it would.

2816. Do you think it would be altogether just that the same salaries which are now very properly paid for the performance of the duty should still be continued, if the persons receiving the salary were relieved from the duty?—I think, if you put it out of their power to do the duty, you should compensate them for the loss of income.

2817. And at the same time make no further demand upon their time?—It would be very reasonable, certainly, to make a demand upon their time if they were compensated for the loss they would sustain in their income.

2818. Do you not think that it might be desirable, while continuing to them their vested rights, to require from them the superintendence and direction of the cemeteries in the case supposed?—Provided they had an efficient superintendence

tendence over those clergy who would officiate there. I am not at all objecting to our having the superintendence if you put it in our power to superintend, but I do not understand what control I could have, as rector of St. Andrew Holborn, over the minister of the cemetery.

2819. Might he not be one of your curates?—Then other rectors would be placed in the same situation. I do not see how he could be amenable to all the parties concerned.

2820. Take the case of a cemetery belonging to your own parish?—Then it would be quite clear that either myself or my curate would do the duty.

2821. Would the case be altered if two or three parishes by common consent combined?—I think that would answer the purpose, if the curates or the rectors of those parishes did the duty.

2822. Subject to that condition, you do not think there would be any inconvenience if the existing parties were required to perform those duties at those cemeteries, receiving emoluments for them?—There would be the hardship of imposing considerably more labour upon the parochial clergy, which I do not think they are in a situation to undertake; I mean on account of the occupation of time, and having to go a greater distance.

2823. Might not that be in some measure compensated by the larger number of burials that would ensue in a healthy situation; we have had evidence before us, that of the number who die within the limits of London, a considerable portion are not buried in the grave-yards or cemeteries now attached to those parishes; do not you conceive that, under the change which I am now supposing, that discrepancy in the number would diminish?—I should think it might.

2824. Might not that afford a larger amount of fees, and thereby compensate for the greater distance that your curate would have to go?—It would act in this way, that the incumbent in such a parish would keep another curate.

2825. Mr. *Vernon.*] In your last answer, you contemplate a churchyard out of London being appropriated to your own parish?—Yes.

2826. But if the same churchyard were appropriated to several parishes, you would object to the inconvenience that might arise from co-ordinate authorities?—If there was one clergyman who exclusively was to do the duty there, it is quite clear that that inconvenience would arise; if the curate of each parish were to do the duty there, that would not arise.

2827. With regard to other authorities, the churchwardens and other officers coming from a variety of parishes, would there not be an obvious inconvenience resulting from all of them acting independently in the same cemetery without any one distinct control?—I should think not, if they were all trustees, as I should apprehend they would be.

2828. In the choice, for instance, of the ground which each might select, might there not be a conflict with regard to what quantity of ground should be used by each party?—That might happen.

2829. Would it not be better that all that should be placed under some one central authority?—I think some one central authority would be very desirable.

2830. You stated that there would be additional expense in any such proposed scheme, arising from the purchase of land; would not that expense be less, provided we assumed the condition that land adequate to the purpose is to be provided, beyond the purlieus of the town, than it would be within the town?—I should think the expense would be less out of the town than in it.

2831. *Chairman.*] Do you consider that in the event of a parish, or union of parishes, obtaining land out of the town for the purpose of interment, there would be any difficulty in setting aside a portion of that ground for persons dissenting from the Church, or the various denominations of religious belief?—I think that would be an objectionable proceeding.

2832. Could not a certain portion be set apart?—It might be done, of course; but I do not think it would work well.

2833. From what circumstance?—I do not think that the juxta-position of parties, on occasions of that kind, the religious services on the interment of the dead, is at all desirable; it should rather, I think, be avoided.

2834. But assuming that there was a large space of ground, and that each persuasion had its peculiar entrance, and its separate ground, could any inconvenience

Rev. *J. T. Robinson.*

29 April 1842.

venience arise?—They would in fact then be separate grounds, and no inconvenience would, I think, arise.

2835. Lord *Mahon.*] Do you find at present any difficulty or reluctance on the part of Dissenters being buried in the churchyards?—I have never met with any reluctance.

2836. Do you suppose then, that a greater reluctance would prevail in the case of those new cemeteries than in the present grave-yards?—I think that a great number of Dissenters would not take advantage of the opportunity which would be afforded them, of having their interments in their own peculiar ground.

2837. *Chairman.*] Where would they be interred?—In ours, I think.

2838. Do you suppose that it would be possible, by having fresh ground for interment belonging to parishes, or unions of parishes, that the parish authorities could, by disposing of part of the ground to wealthy persons as vaults, get a sufficiency to bury the poor without expense?—I really do not know exactly what answer to make to that; I think it is doubtful; I should rather think not.

2839. Colonel *Fox.*] Do you think that there would be any desire on the part of persons to be buried where their ancestors were buried, and that there would be a feeling of opposition to having the burying places out of town on that account?—I think, generally speaking, there is a very strong desire, on the part of all classes of society, to be buried where their families are interred.

2840. Lord *Mahon.*] Supposing it were the object of the Legislature to discourage burials in large towns, do you think that it would be wisest to attain that object by a total prohibition, or by imposing a much higher fee for burials in the churchyards, so as to allow of it in rare cases, where the feelings of the parties concerned might be strongly interested?—I think the imposition of a large fee would be viewed with feelings of strong distaste.

2841. As unjust to the poorer classes?—Unjust, I think, to all classes; in the first place, persons constructing a family vault pay very largely for the ground, and very large fees; and in this case they would have to pay large fees again, in order to carry into effect the object they had in view in the construction of the vault.

2842. But excluding for a moment the case of a family vault, how do you conceive the case would stand with regard to common graves?—I think that it would be a great hardship to persons to have to pay a larger fee in order to indulge their feelings in that respect.

2843. You think it would be a less hardship to prohibit it altogether?—No, I think not.

2844. The question was on the supposition of the Legislature wishing to discourage, as much as possible, burials in large towns; do you think that that object would be attained with the least degree of hardship by a total prohibition, or by imposing a very high burial fee, say double or treble the present amount, in cases where there might be a strong wish for those burials?—I should say the latter course would be preferable, leaving it open to those who thought proper to pay that fee to do so.

2845. Colonel *Fox.*] Do not you think that that would bear hard upon the poorer classes, who might have the same feelings as the rich, and not be able to gratify them?—I think it would; but I think of the two evils it would be the less.

2846. Lord *Mahon.*] Do you find that feeling to prevail among all classes?—Yes; quite as much among the poor as among the rich.

2847. Mr. *Kemble.*] Do not you conceive that the poor would think that that was establishing two laws, one for the rich, and another for the poor?—Yes.

2848. Mr. *Yorke.*] And it would practically have the effect of excluding the poor?—Yes.

2849. Mr. *Kemble.*] In the event of cemeteries being constructed by the union of parishes, and a chaplain being appointed to do the duty, by which you were relieved from the duty of those interments, should you not be content to take a compensation of much smaller amount than you are now in the habit of receiving?—I think the compensation should be in proportion to the average income.

2850. But supposing, for instance, that you now derive 100 *l.* a year in the way of fees, having to perform the interments, if you were relieved from that by the appointment

appointment of a chaplain by those parishes to do the duty, should you not be willing to take less than the 100 *l.* a year?—You take from me the opportunity of doing this duty, which I am quite ready to do, and also to receive the fee.

Rev. *J. T. Robinson.*

29 April 1842.

2851. Then you would object to receive less than you are in the habit of receiving?—I do not say so; I merely was replying as to the ground of the question, which seemed to be, that because we had not the duty to do, the compensation should be less; but you are not taking the duty from us to relieve us; you are taking away the duty to bring about a public benefit.

2852. But you would, in point of fact, be relieved?—Yes.

2853. Under those circumstances, would you not be content to take a less amount than you are now in the habit of receiving?—Certainly.

2854. Do not you think that that would be the feeling generally among the clergy?—I should think it would.

2855. Colonel *Fox.*] You would regret the duty being taken from you, but you would not wish that the compensation should be the same as the amount of fees, while you perform the duty?—Exactly.

2856. Lord *Mahon.*] Supposing a willingness to exist to perform the duty at the new cemeteries, no reduction, in your opinion, ought to be made in the present amount of the income?—No, I think not.

2857. Colonel *Fox.*] In the event of being unable to effect the object in view, do you think that there would exist a general feeling or prejudice amongst the middling or lower classes against putting quick-lime or any other material in the coffins, or over the coffins, that would destroy the bodies more rapidly than they otherwise would be destroyed?—I think it would excite a very strong feeling of disgust.

2858. You would not have any such feeling yourself?—Certainly not.

2859. Mr. *Kemble.*] Do you happen to know whether the parish-clerk in your parish derives much emolument from the fees on interments?—He derives considerable emolument; I am not prepared to say what.

The Reverend *William Weldon Champneys*, called in; and Examined.

2860. *Chairman.*] YOU are rector of Whitechapel parish?—Yes.

Rev. *W. W. Champneys.*

2861. Will you have the goodness to state generally to the Committee your sentiments on the subject of their inquiry?—On the first point I would say, with regard to the desirableness or the necessity of such a change, that I have had no personal experience of any injurious effects arising from interments in my own neighbourhood. The rectory-house is situated at the side of the churchyard, graves running close to the party-wall on one side, and within the distance of a few yards on the other, and I have been there resident five years, and I have never found the slightest inconvenience; nor, in fact, have I been able, though in the habit of visiting dying persons in the parish, to discern that peculiar smell; nor did my predecessor's family, who lived there before me for 30 years, find any inconvenience, though the churchyard is very closely filled.

2862. Lord *Mahon.*] How do you ascertain that fact?—By statements made to me by themselves. But as to the general feeling which I have observed in my parishioners, and as far as I have been able to ascertain, the feeling of the country generally, I have been struck with the conviction on their minds that it was desirable, for many reasons, chiefly the one I have mentioned, viz., that there was this deleterious smell in the air, as well as for decency, that interments should take place outside of large towns. On the ground of its being a prevailing feeling and desire, and wishing in every way to conform to that feeling, I have joined in a petition, as one of the trustees or select vestry of the parish, to Parliament that such alteration should take place; and though I have no personal experience of the evil or danger that is generally thought to prevail, I certainly feel it my duty to accede entirely to the wish of the parishioners generally, and I have therefore joined in this petition to the Legislature to remove interments. With regard to the state of my own churchyard, I should say decidedly that it is not in such a state as to allow of frequent interments. As to the possibility of interments taking place without any violation of decency, I mean without laying bare the rows of coffins, I know, from personal investigation, it is possible that such interments should take place, because there are vacant spots, which in consequence of want of manage-

Rev. *W. W. Champneys.*

29 April 1842.

ment have been passed by, where bodies might be laid in earth which has not, as I believe, been disturbed at all; but the difficulty of doing that I am also convinced of; and, on the whole, I feel that it would be highly desirable, on the ground that I have mentioned, namely, the prevailing feeling of persons, and I have no reason to doubt that it is correct, that some legislative enactment should take place.

2863. Mr. *Ainsworth.*] What is the size of your burial-ground?—It is very inadequate to the size of the parish; I should think it might be an acre. The deaths in my parish I calculate to be about 1,200 in a year; I have not been able to ascertain it accurately, but I have taken the district of one of our registrars, which contains a third part of our parish, and by multiplying the amount of deaths in his district by three, I ascertain that that would be the number of deaths in the parish.

2864. *Chairman.*] Are all those interred in your burying-ground?—No; the average number of interments would be 360.

2865. Mr. *Ainsworth.*] Where do you conceive the remainder of those are interred?—They are interred in some cemeteries in the neighbourhood; one of the cemeteries standing within a stone's throw of the church itself.

2866. What is the name of that?—Sheen's Burying-ground.

2867. *Chairman.*] What is the size of it?—I am not aware, but it is small; it is a long narrow strip, surrounded on all sides by houses.

2868. Colonel *Fox.*] What regulation have you as to the depth at which bodies should be buried?—Since I have been in the parish, I have given orders that the graves should be made as deep as possible; 16 feet I think is the depth; but they have gone much below that.

2869. Are none to be put higher than 16 feet from the surface?—Yes.

2870. What height from the surface is the nearest coffin to be?—That is a difficult question to answer, and I will state the reason; there are many family graves in which persons claim the right of burying over former graves, which is allowed to be a right, and in those they have buried far more nearly to the surface than they should be buried; I have expressly forbidden that for the future when it once came to my knowledge; but the coffins ought not to lie less than four or five feet from the surface.

2871. But there is no specific provision for that?—For the future I have prohibited it, having once seen the evil; the coffin that I saw could not be more than three feet from the surface.

2872. Have you had any complaints made to you of the sexton, or any of the grave-diggers, as to improper removals of bodies, or indecencies with bodies in breaking coffins open?—No, I have not.

2873. Lord *Mahon.*] From the feeling which you say prevails in the parish against interment in towns, do you imagine that a moderate rate for the construction and purchase of a new cemetery would be cheerfully borne?—In answer to that question, I would say that people very often make complaints when the complaints do not touch them; but when they come to be touched in their pockets, they object to it; and I apprehend that would be the case with regard to those; that many of those who are loudest in the complaint, would be the slowest to put their hands in their pockets.

2874. You think that though they now loudly complain of the grievance, the moment they heard of these provisions they would be less ready to apply themselves to the remedy?—I apprehend that there are many of that description; I should say that the feeling, though it is a general one, has arisen rather from the strong feelings of the few than from the question having been universally considered, and it being universally felt in the parish.

2875. *Chairman.*] You are speaking of your own parish?—Yes.

2876. You are desirous that there should be some legislative enactment to remove burials from the metropolis?—Yes, on the ground that the feeling is a prevailing one, and an increasingly prevailing one; and wishing to go even with the prejudices of my people, I have joined with them in a petition on that ground, but not from any personal conviction.

2877. Assuming that any legislative enactment took place, what have you to suggest upon the subject as to the mode of legislating?—There would be a difficulty from the different sizes of parishes. In my own parish, I apprehend we should have the means, if there was a willingness on the part of the parish to concur, to take a cemetery for ourselves, and bury in that cemetery.

2878. Assuming

Rev. *W. W. Champneys.*

29 April 1842.

2878. Assuming that you did that, you could only effect it by raising a sum of money from the parish; in the event of that, as the sum would be raised upon persons of all denominations and religious feelings, must you not allow them a part of the ground, in proportion to the size of the ground that you purchase?—I should feel that it was in perfect conformity with the spirit of the Church of England, that those who object to the Church service should not have it performed over them; while at the same time contributing to the expense of this, it would be fair and right that they should have a portion of the ground, and that if they objected to its being consecrated, it should be unconsecrated.

2879. In the event of a legislative enactment being made, and it being necessary to have a certain authority in parishes or unions, in whom would you vest that parochial authority, for the purpose of purchasing land and superintending all the necessary arrangements which must occur from the change in the system?—My impression would be, that it would not be desirable to vest it in the guardians of the union, but rather in the authorities of the parish; by that I mean the churchwardens chiefly, and the lay members of the parish, rather than the clergyman; and my reason for saying that it would be better not to vest it in the guardians of the unions would be, that I feel that, though it is a prejudice for persons to wish to be buried near the church, or near their own families, if we believe the great doctrine of our faith, the resurrection of the body, yet at the same time I feel that it is desirable that that feeling should be as much as possible cherished: and I conceive that that feeling of attachment of parishioners to their clergyman, and of the clergyman to those parishioners to whose relatives he has ministered on their death-bed, would be more likely to be maintained in this dissolution of the present system of interment by the individual connexion, as far as possible, subsisting still even after death between the minister and his people; and I conceive that the vesting it in a board of guardians would be at once creating a revolution in that feeling, and taking away one very powerful hold and influence which the minister now has over the families of the departed, to whom he has ministered in their trouble, and to whom he ministers still.

2880. You would allow part of the authority to exist in the clergyman?—The legislative part of the authority, that is to say, the conduct of the funerals, the arrangement of the cemeteries, I would rather put on the shoulders of the churchwardens and the lay authorities of the parish; I would reserve to the clergyman the right of burial, the spiritual part, if I may so call it, of the interment of the dead, and that part of the connexion which now subsists between the parties.

2881. Mr. *Kemble.*] If I understand you rightly, you would feel an objection to cemeteries being established, and chaplains appointed, distinct and different from the clergyman of the parish?—Yes.

2882. You think that it would be rather a dissevering of that connexion which ought to exist between the clergyman and his parishioners?—Yes.

2883. Mr. *Ainsworth.*] Then whatever cemeteries were erected in the neighbourhood of cities or towns, you think that the clergyman of the parish church and his assistant should have the jurisdiction?—Yes, in cases where the parish is sufficiently large to have a cemetery of its own.

2884. *Chairman.*] In the event of new ground being taken, assuming that a person of a different denomination from the Church of England wished to be interred in consecrated ground of the Church of England, would there be any objection made on the part of the clergyman?—If they consented that the burial service of the Church of England should be read over the body, I conceive not.

2885. Mr. *Vernon.*] At the present moment, with respect to three-quarters of your parishioners, that intercourse to which you have so feelingly adverted between yourself and your parishioners, is, in fact, dissevered by their interment elsewhere, and not under your auspices?—Yes.

2886. *Chairman.*] Does not that, in you opinion, show the necessity of some legislation on the subject?—It does.

2887. Mr. *Kemble.*] In the cemeteries which are established now by companies, part of the ground is consecrated, and part is not consecrated, and there are usually two chapels erected, one for the Dissenting ministers, and the other for the clergymen of the Church of England. In the case of parochial

Rev. *W. W. Champneys.*

29 April 1842.

cemeteries, such as are contemplated, should you feel any objection to that system being carried out?—On the same principle being carried out, which allows the exercise of conscience on that matter, I scarcely apprehend that opposition could be offered to the erection of a dissenting chapel of interment; but it seems to me to be a different thing in the case of a private speculation permitting such a chapel to be erected, and by legislative enactment erecting the chapel of the Dissenter on a level by law with the Church.

2888. Mr. *Vernon.*] You object to a Dissenting chapel being erected out of funds provided parochially?—Yes, and by legislative enactment raised on a level with the chapel of the Church of England.

2889. Your objection, then, is not to the use of the ground so contributed to by Dissenters, because at the present moment Dissenters have a common right with all other parishioners to the use of the ground in the churchyard?—Precisely.

2890. Colonel *Fox.*] Have you ever given your mind to the subject of any mode by which these cemeteries could be furthered; have you any suggestions to make as to the way in which this could be carried out?—No, I have not. There was one observation which perhaps I may be allowed to make, it arose from a question put to Mr. Robinson to this effect, Whether, if compensation were given to him without his being called upon to do the duty, he should consider it right to take less than the amount now received? Now, if a question of that kind were put to me, my answer would be, that under the present circumstances of my parish, I personally, as the rector, do not do the general occasional duty, as it is called technically among the clergymen, that is, the duties of burial, and so on; but out of the income that comes in to me from those interments, I am enabled to have three curates in a parish of 34,000 to assist me in the discharge of my spiritual duties. I therefore feel that anything that would deprive me of the means of one spiritual helper in my parish, or take away the time of one spiritual helper by taking him away on certain days, or certain hours of the day, for interments at a distance, would be a serious loss to me and my parish spiritually.

2891. Is the church of Whitechapel endowed?—It is a rectory, and the income is raised partly from fees in the church, and partly from the tithe, or, more properly, the Easter offerings from the parishioners.

2892. Has your income suffered at all, owing to the formation of the cemeteries as yet?—It has not suffered perceptibly; the number of interments have decreased in the latter years, and that decrease is still going on.

2893. Mr. *Kemble.*] Does the parish clerk derive any great emolument from the burials in your parish?—The parish clerk's share of the fees in my parish is one fourth of my own.

2894. Does that constitute his principal emolument?—That constitutes, I think, his chief emolument. There was one more point which I had to mention with regard to interments in the church; those are very rare; during the time I have been in the living, five have taken place, two children, and three grown persons.

2895. *Chairman.*] Are the fees heavy for interment in the church?—Yes.

2895*. That prevents the frequency of interment?—Yes, they never occur in new cases; they are always cases of old families.

Dr. *Holt Yates,* called in; and Examined.

Dr. *Holt Yates.*

2896. Colonel *Fox.*] ARE you of opinion that the present system of burying in grave-yards is prejudicial to the population of large towns?—I think there can be no doubt of it.

2897. Have you considered what remedy could be brought to bear upon that important subject?—Only providing burial-grounds at a distance; I am decidedly of opinion, and I state that from facts, which if it is the wish of the Committee to enter upon them I would do so, that that is decidedly prejudicial to the public health.

2898. Do you think, in the event of public cemeteries not being made at the outside of the town, putting quicklime, or chlorate of lime, or any other substance in each coffin would remedy the evil?—It would go far towards it; it would hasten animal decomposition, and in that way do a great deal of good.

2899. Do

2899. Do you think that there would be a prejudice against it among the poorer classes of the community?—I have no hesitation in saying that that would be the case, particularly among the Irish. Dr. *Holt Yates.* 29 April 1842.

Mr. *John Garland*, called in; and Examined.

2900. *Chairman.*]. YOU are one of the churchwardens of the parish of Leeds?—I am. Mr. *John Garland.*

2901. Have you any observations to make to the Committee?—I have read Mr. Baker's evidence, and I am ready to confirm it in all points except one; Mr. Baker could not say positively that the rate when it was asked for in Leeds, was strictly confined to a burial-ground, and not for any other purpose. Now I can say that that was the case; but I should say further that all the other churchwardens in Leeds were Dissenters; and I believe the sum of a shilling was asked as an exorbitant sum, rather to disgust the parish, than with a good intention to ask for a burial-ground.

2902. Who proposed the shilling rate in the first instance?—One of the Dissenting churchwardens.

2903. You think he did that for the purpose of disgusting the people?—I have no doubt of it; I suggested that a rate very considerably less than that would answer the purpose; but they being all Dissenters but myself, they suggested a shilling rate.

2904. You think it is necessary in Leeds to remove the burial-ground from the town?—Yes.

2905. Colonel *Fox.*] Do you consider that the great body of Dissenters at Leeds feel that it would be necessary to have grave-yards out of the town?—I believe they do.

2906. Was not that feeling expressed in the vestry in any way?—In our private meeting before going to the vestry, we agreed to put two resolutions to the meeting, the one was declaratory of the necessity of a burial-ground outside the town, and the other for a rate of a shilling in the pound. Now I must say, that one of the churchwardens, who was appointed to move this resolution, deceived us, because he combined both in one, and without asking the meeting to consent to the necessity of a new burial-ground, he stated the particulars of the situation we were in, and asked for the rate.

2907. Was there no amendment moved to that?—There was not.

Lunæ, 2° die Maii, 1842.

MEMBERS PRESENT.

Colonel Acton.	Sir R. H. Inglis.
Mr. Ainsworth.	Mr. Kemble.
Sir William Clay.	Lord Mahon.
Mr. E. Denison.	Mr. R. Yorke.
Colonel Fox.	

W. A. MACKINNON, Esq. IN THE CHAIR.

Sir *Benjamin Brodie*, Bart., called in; and Examined.

2908. *Chairman.*] THE Committee are very desirous of having your sentiments upon the subject which is now under their consideration; their object, you are aware, is to ascertain how far the practice of interments in large towns and their precincts is or is not injurious to the health of the community?—I cannot doubt that the effluvia of putrid bodies are always injurious to human health, and if the interment in the middle of large towns be so managed as that any putrid effluvia escape, it must, of course, be injurious to the health of the town. Sir *B. Brodie*, Bart. 2 May 1842.

2909. Do you consider that it is possible to inter in a large town without those putrid effluvia arising?—Not to such an extent as is necessary in so great

Sir *B. Brodie*, Bart.

2 May 1842.

a town as this: the interments in the interior of this town must be injurious to the health of the town.

2910. Have you at all directed your attention at what distance from inhabited places the effluvium would cease to be injurious?—No; I have no practical knowledge upon the subject; I have heard of effluvia being carried a considerable distance when the wind was in a certain direction, at particular seasons of the year; hot weather, especially after rain, brings out effluvia.

2911. Mr. *Ainsworth.*] Can you state at what distance?—I have no particular recollection; what I have merely heard cannot, of course, be evidence.

2912. *Chairman.*] When you state that it would be injurious, do you mean by generating particular diseases in the human frame, or a predisposition to illness in general?—In the first place, the gas which is evolved from putrid bodies is chiefly sulphuretted hydrogen, which is so noxious a gas that the admixture of one part of it with 500 of atmospheric air is almost immediately fatal. The admixture of this gas alone must be, of course, injurious to health; but I apprehend something escapes from the bodies besides the sulphuretted hydrogen, for the gas has a peculiar odour, as if it carried some kind of animal matter or poison with it. Sulphuretted hydrogen, if mixed with atmospheric air in the proportion which I have mentioned, destroys life immediately, by acting on the nervous system; but if it be more diluted the effect is not immediate, and it produces some kind of fever, what is generally called typhus, or putrid fever. Some years ago I recollect there were some sewers opened near Manchester-square, I think in very hot weather in summer, and the stench from those sewers was smelt by persons going by for a considerable time, and I understood that the result was a fever, which destroyed a good many lives in that district. I recollect once when I had a patient on whom I performed an operation, it so happened that the night after the operation some sewer gave way, or some pipe gave way, and there was a horrible stench in the house; a young professional friend, whom I had left there, told me this in the morning, that the stench was such that he could hardly sleep; the nurse and housekeeper were both taken ill; one of them died, and the other very nearly died; the patient died also; and I was led to believe that he died partly in consequence of the effects produced by the escape of this noxious effluvium.

2913. From what you have stated, you are of opinion that this effluvium arising from putrid matter or decomposed bodies, where there is any predisposition in the subjects, is certain to produce disease; but in cases where a person is in perfect health, he may pass over it with impunity?—Yes; it is with those injuries as it is with mechanical injuries; the effect depends partly on the cause that operates, and partly on the subject on which it operates. One man may get a scratch in the leg, and it may be nothing at all; but let a dram-drinker get such a scratch and it may kill him. So a man in strength and health may be exposed to a poison and not suffer, while a man in very weak health will be killed; that is, persons in one condition of the system resist the poison, while in another condition of the system they do not resist it at all. So when the cholera came here it killed the old and infirm persons, and not the strong and healthy.

2914. Under the statement you have made, do you entertain any doubt that the effluvia issuing from vaults under different churches in this town, for instance, those churches in the Strand, must be injurious to persons of delicate health?—I cannot doubt that if the effluvium escapes it must be injurious.

2915. Mr. *Yorke.*] Is the escape of that effluvium a necessary and inevitable consequence of interment?—I should think, as they inter in this town, the effluvia must always escape; if you can bury 20 or 30 feet deep, I should apprehend it would not escape, or so little or so slowly that persons would not suffer.

2916. Sir *R. H. Inglis.*] Must not the same quantity of this noisome gas escape under all circumstances of interment, though at a more gradual rate, and consequently more diluted; but still, if a body be buried at 30 feet, must not the specific gravity of the gas eventually rise up?—I am not chemist enough to answer that question, for I do not know what would be the effect of its passing through the soil, and I suppose there may be substances in the soil which would destroy the gas; for instance, chloride of lime in the soil would extinguish the gas.

2917. Do you conceive that putting chloride of lime on the surface of coffins, or distributing it sufficiently largely in the soil of a churchyard, would neutralize the gas arising from the decomposition of the body interred, so as to render

render interment practically innoxious, whether in towns or elsewhere?—I have not chemical knowledge enough to answer that question. I suppose it is a question which can be answered only by experiment. I know that chloride of lime will remove the most noxious smells in sick rooms.

Sir *B. Brodie*, Bart.

2 May 1842.

2918. The case to which you refer as occurring in the neighbourhood of Manchester-square, is the only case you have mentioned as occurring in your own practice; in that instance, are the Committee to understand that the noxious smell and its consequences arose from the decomposition of putrid animal matter, forming the subject of the present inquiry?—Of what occurred in Manchester-square I have only general knowledge; I know that for some time the sewers were open, and that I smelt a considerable stench as I went by, and then I was informed by different persons, whom I believed, that there had been fever in the neighbourhood just afterwards, which had destroyed many people, but I know nothing more.

2919. In the course of your own immense professional practice, can you state to the Committee any instance in which you have traced fatal effects from the escape of gases from the decomposition of human bodies in churchyards or elsewhere?—No, I do not know that I could point to a particular case; my attention has not been particularly directed to these subjects. Dr. Chambers, Dr. Latham, and persons in that part of the profession whose business it is to inquire more into them, would be able to give more information upon these subjects. If so small an admixture of sulphuretted hydrogen as I have stated will produce instant death, there is no doubt that if more largely diluted it must produce disease of some kind.

2920. Mr. *Denison.*] Has it occurred to you generally, in considering the causes of disease in the metropolis, to consider the crowded state of the churchyards as one cause of fever or disease?—I have always considered that as one cause, and the crowded state of the population in alleys and courts another cause.

2921. Sir *R. H. Inglis.*] And the want of sewerage another cause probably?—Certainly.

2922–6. Sir *William Clay.*] Is it your opinion that the effluvium gendered by the gases evolved from the decomposition of dead bodies is the means of generating any particular form of disease; typhus fever, for instance?—I have been led to believe that it does generate what is termed typhus fever. In the case I mentioned where the nurse and another woman in the house died, after—I do not say it was *propter hoc*, but it was *post hoc*—the stench had been prevalent in the house during the night, they died of what is commonly called typhus fever.

2927. Colonel *Fox.*] Are you acquainted with the locality of King's College Hospital?—I know where it is.

2928. Do not you conceive the site must affect the patients, having the grave-yard immediately under the windows?—I do not know anything of the grave-yard there, but I do not think it a good locality; I think it would be very desirable there should be no more bodies buried there.

2929. You are not aware that it is considered unwholesome as an hospital?—No. I was a subscriber to the hospital originally, but I do not know much about it.

2930. Sir *R. H. Inglis.*] Would you consider that an area for ventilation, unobstructed by buildings, was a compensating advantage, as contrasted with the purpose to which that area was applied?—Certainly, that is a compensation, as far as it goes.

2931. Are you aware of the purposes to which the building now used as King's College Hospital was applied previously to that appropriation?—It was a workhouse.

2932. Are you aware of any complaint made at any time with respect to the mortality in that workhouse, or have you heard anything of the mortality in King's College Hospital?—No, I have heard nothing on the subject.

2933. You are not personally acquainted with the locality itself?—Yes, I know the locality; I have been at the hospital.

2934. *Chairman.*] As a general principle, you think it an unhealthy site to habit so near a grave-yard?—Yes; I think a grave-yard of that description should not be there, nor anywhere else in London.

Sir *B. Brodie*, Bart.

2 May 1842.

2935. Colonel *Fox.*] Have you read the evidence respecting that hospital?—I have read it over.

2936. Do you conceive it desirable that an hospital should be placed in such a site?—I think it is too near to the grave-yard; but the books of the hospital would show whether the diseases we might expect had prevailed there or not.

2937. Sir *R. H. Inglis.*] If the books of the hospital do not show that the diseases which might be expected have prevailed there, you think the inference drawn from the proximity to a grave-yard would be repudiated?—Yes, whatever the books of the hospital show is good evidence still; if the ground is so full as it is stated in the evidence, it ought to be used for burials no longer.

2938. Colonel *Fox.*] Do you consider that a portion of quicklime put into each coffin would have the effect of destroying the body and of preventing any of those noxious effluvia?—I suppose it would, to a great extent. Upon many of these points you may have better evidence than mine: that of Dr. Prout, for example, who is not only a physician but a chemist, and whose attention has been very much directed to these subjects.

The Rev. *Evan James* was again called in, and made the following Statement:

Rev. *E. James.*

2939. I WAS asked on my former examination whether I had experienced anything offensive issuing from the tombs in attending Stepney churchyard, in answer to which, I said, no. I beg to repeat that; but though I say that, at the same time I have suffered dreadfully from effluvia issuing from bodies interred, where parties have kept their friends till they were in such a state of decomposition as literally to render it impossible for any person to approach near the coffin. I recollect on one occasion distinctly, where the corpse was brought into the church between the services on a Sunday, no language can describe the scene I witnessed; the undertaker's men all covered over with that which ran from the coffin, and such a scene in the middle aisle of the church it was enough to poison a person; and I was obliged to send for chloride of lime to disaffect the church to enable persons to come to afternoon service, which they could not have done unless I had taken that precaution.

2940. Lord *Mahon.*] What period of time after death had the corpse to which you allude been kept?—That I cannot answer; but that I presume depends very much upon the state of the weather.

2941. *Chairman.*] It is your impression that it is very injurious to the living to keep bodies too long uninterred?—Certainly.

2942. What time do you think they should be allowed to be kept unburied?—I should say generally five days.

2943. Lord *Mahon.*] In practice does it happen, except in very rare cases, that any body is kept from burial longer than one week?—In the summer time it very often happens.

2944. On what ground?—The feeling which poor people, and especially people in the middle ranks, exercise towards each other; they think that if they inter their friends before a certain time, they do not show proper respect to their friends, therefore they are induced to keep them longer on that account.

2945. Do you mean that a feeling prevails among certain parties that greater respect is paid to the dead by the delay of their funerals beyond one week?—I do not say anything about the length of time; but that if they bury their friends soon after decease it is considered by their friends and the public a want of respect to the deceased. I was asked the other day whether I had ever tasted the water from the pump in Stepney churchyard; I could not at the time answer, though I had given orders to the sexton not to bring that water into the vestry room; I have ascertained since that I have been in the habit of drinking it for years, and I have ascertained further that there are three medical men who live within 50 yards of this pump, and I find that they are all in the habit of drinking it constantly.

2946. Mr. *Ainsworth.*] Is it a very deep well?—That I cannot say; the reason they assign is that it is the best water they can get in the neighbourhood.

Jovis, 5° die Maii, 1842.

MEMBERS PRESENT.

Colonel Acton.	Colonel Fox.
Mr. Ainsworth.	Sir Robert Harry Inglis.
Lord Ashley.	Lord Mahon.
Sir William Clay.	Mr. Vernon.
Mr. Cowper.	Mr. Redhead Yorke.
Mr. Evelyn Denison.	

W. A. MACKINNON, Esq. IN THE CHAIR.

The Right Rev. Lord *Bishop of London,* Examined; as follows:

Right Rev. *Lord Bp. of London.*

5 May 1842.

2947. *Chairman.*] THE Committee are highly gratified at having the pleasure of seeing your Lordship before them, and as you are aware of the subject at present under the consideration of the Committee, they are anxious to hear any observations you may have to offer relating to a matter of so much importance, with a view of guiding them in their determination. I feel it therefore, my duty to state to you, that we desire to have your sentiments on all the bearings of our investigation; and I should wish to leave it to your Lordship to state whether it would be more acceptable to you, in the first place, to give us your sentiments, to state your opinion upon the subject generally, and, after you have expressed that opinion, to answer any questions to elucidate whatever may not be clear to the Committee, which questions may be put to you by myself, or by other gentlemen, who are here as Members; or whether you would wish at once that questions should be put to you by myself, and afterwards by any gentlemen of the Committee, and then that you should state your sentiments: whichever of these two courses pleases you, or meets with your approbation, the Committee will be gratified to follow? —I think, perhaps, that the best course to pursue, will be that of my stating generally the view which I take of the question, and then answering such questions as any Member of the Committee may please to put to me upon any part of the subject. I am glad to have been invited to attend as a Witness before the Committee, and I shall have great pleasure in affording them all the assistance that may be derived from my experience and observation. The subject before them is one which has engaged my attention now for 10 or 12 years; indeed, I may say even longer than that, for I felt interested in it when an incumbent in the city of London, 20 years ago. I then made some observations which convinced me, that not a long time would elapse before it would become the duty of some person to take up the question, and to consider what remedy could be applied to an evil too notorious to admit of denial or of doubt. I do not know whether I am irregular in saying that I have seen some of the evidence that has been given before this Committee, because I do not know whether I ought to have seen it.

2948. The only object of the indorsement on the back of the printed evidence is with the view of keeping it from the public; independent of that the Committee have no wish to prevent your Lordship expressing any opinion that would tend to elucidate the subject before them?—I look upon the question as one which concerns not only the public health but public morality in a certain degree, and undoubtedly the interests of the Church; it is also one of decency and propriety, and respect ought to be shown to the feelings of Christians of every denomination. I resided myself for eight years in the parish of Saint Botolph, Bishopsgate, as rector; for the first five years of that time I inhabited the rectory-house, which was situated in the churchyard; the churchyard being very small, compared with the population of the parish, amounting at that time to about ten thousand; and I was told before I went into the house that I should be annoyed, particularly as having a family of young children, from its proximity to the churchyard. However, I must say that during a residence there of five years I suffered no inconvenience whatever; that I saw no remarkable

Right Rev. *Lord Bp. of London.*

5 May 1842.

able violation of decency; and that my children's health was not affected. Then I went to live in another part, remote from the churchyard, and I was not sensible of any improvement taking place in the health of my children, or that any particular benefit was derived from the removal. I may state generally, that entertaining a very strong opinion of the necessity which has long existed for some change in the present system of interments in towns, especially in the metropolis, I still must think that the actual evils which have resulted from it have been considerably exaggerated; that in those churchyards in London, where due care is taken by the parochial officers to ensure regularity of interment on a certain system, which prevents the opening of graves within a given time after interment, there is no real detriment to the health of the inhabitants; but I think it extremely undesirable that a grave, having been once opened, and an interment made therein, should ever be again opened within the memory of the persons who witnessed the first interment, except for the burial of a near relation of the party deceased. Now it is notorious that in London the graves are made 15, 16 and 20 feet deep, and that repeated interments of persons, entirely unconnected with one another, take place in those graves till the uppermost coffin is within three feet of the surface, or perhaps even less, which is certainly less, from all the inquiries that I have made, than is necessary to prevent the percolation of, or the egress of gases. I believe, from all I have observed and heard, that if you can have four or five feet of earth over the corpses buried, there is no reason to apprehend any inconvenience from their decomposition. I would take the liberty of adverting to a conversation which one of the witnesses examined before this Committee, reports himself to have had with me upon the subject, which is, generally speaking, correct; but he says, I told him that I had, on one occasion, seen 13 skulls thrown out where a grave was dug. What I did say to him was, that I had been recently told by a rector of a small parish in the city, that on one occasion he had seen in his churchyard 13 skulls, which, in itself, is an indication of the indecent state into which his churchyard had been brought. With respect to the sanitary part of the question, although I think the actual evils, as far as relates to the churchyards of London, have been considerably exaggerated, I am quite ready to admit the necessity of making a change, preserving, if it be possible, a due regard for the interests and feelings of parties concerned in interments in cemeteries situated in crowded neighbourhoods; supposing those cemeteries to be already so occupied with graves as to make it impossible to inter other bodies without disturbing the graves; because I hold it to be quite immaterial where a person is buried, if you can bury him with about four or five feet of fresh earth over him. With respect to interments under churches, I consider it altogether an objectionable plan, and that in no case ought interments to be made, except of bodies buried in lead of a certain thickness, for I am persuaded that in 19 cases out of 20, a properly made leaden coffin effectually prevents the escape of any gases. Now and then a person dies in a peculiar state of body, which causes a rapid evolution of certain gases, which may in these cases, perhaps, burst the coffin, or render it necessary, as they call it, "to tap it;" but I have been in a great many vaults where bodies have been buried in lead without perceiving any unpleasant odour; and I do not believe that, generally speaking, any evil results from it. It has been the practice of the Church Building Commissioners, within the last 24 years, to sanction the construction of catacombs under churches, arched with brick or stone, and having no entrance from within the church, which, indeed, under no circumstances, ought to be permitted; and I have never heard from the clergymen or parish officers, in any case, that any inconvenience has been experienced from interments in such vaults. I am sorry to say there are some churches, some old parish churches, in which bodies have been interred in wooden coffins under the church; one of them I see is noticed in the evidence taken before this Committee, the church of St. Martin's, Ludgate-hill. The reason assigned to me by the churchwardens when I spoke to them on the subject was, that they had no other place where it was possible to inter the parishioners; but, notwithstanding that, I told them that they should not permit the interments of bodies under the church except in leaden coffins. I have been, of course, concerned, as bishop of the diocese, in the new cemeteries which have been formed under the Act of Parliament, and there are one or two cemeteries of considerable size in London, which are

Right Rev. *Lord Bp. of London.*

5 May 1842.

open without the sanction of the Act of Parliament, and consequently without consecration. These cemeteries it is impossible to preserve exclusively for the purpose of interment, if the proprietors should choose to part with them for any other purpose, a state of things which I think ought not to be allowed; and, therefore, in any measure which may be adopted for remedying the existing evil, I am strongly of opinion that security ought to be given, that, except in very special circumstances where the Legislature may think proper to interfere, cemeteries set apart for the purpose of Christian burials should be secured in perpetuum for that purpose. I mention special instances in which the Legislature might think fit to interfere, knowing that there are cases where public improvements render it necessary to be done, as at Liverpool and in London, and I believe in some other large towns. Feeling, in common with other persons, the necessity of applying some remedy for the evil complained of, I am at the same time interested in the subject for another reason; looking to the interests of the parochial clergy of my own diocese and of others, but especially of my own, as being involved in the question. I am sure that the clergy, generally speaking, would be willing to make some sacrifice for the sake of effecting so great an improvement as is contemplated; but you cannot expect men, the principal part of whose subsistence in some cases depends upon the fees arising from a practice that has hitherto not been complained of, willingly to give up the whole source of that income without some compensation. In some of the parishes, as I will shortly prove by instances, a considerable proportion of the incumbent's income arises from burial fees; and whatever measure is adopted with a view to remove the interment of corpses from cities and crowded towns, to cemeteries placed in the neighbourhood, it will scarcely be possible to prevent considerable loss to the clergy; because, even if you can secure to them the fees to which they are now entitled by law, for every corpse which is carried out of their parish to be buried in a cemetery, they will mostly lose the complimentary fees, and what are called "the fittings," that is to say, scarves and hat-bands, which in some parishes amount to a very considerable sum annually; these are only given, of course, where the clergyman attends in person, and unless he himself performs the ceremony in person he cannot expect to receive what are called the complimentary fees. All I can say with reference to that part of the subject is, that I hope that in any legislative measure, some care will be taken to diminish the loss to the clergy, as far as consistent with the public interest; and that such a thing may be done, though I am afraid not without some difficulty. In the first cemetery established in the neighbourhood of London, that of Kensal Green, when the whole question was new, and the effects of the cemetery could hardly be calculated, a fee was reserved, I forget the amount, upon each funeral coming from certain parishes, to the incumbents of those parishes, which, however, proved to be an utterly inadequate compensation, and the incumbent of Paddington, whose income arises principally from fees and Easter offerings, informs me, that in consequence of the opening of that cemetery he considers himself to have lost at least 200*l.* a year; that from one parish; and the loss to the rector of St. Mary-le-bone, I am sure, cannot be less. The next cemetery opened was that at Highgate. That bill was passed at a time when I was prevented, by a severe illness, from attending to public business; and by the Act which was passed, a small fee was secured to the clergymen, and there again they are great losers. The third cemetery near London was that of the West London and Westminster cemetery. In that case the company are obliged by law to pay a fee of 10*s.* for every funeral to the clergyman from whose parish it comes. That sum was considered by the clergymen, whom I consulted upon that occasion, as being a fair compensation, taking an average, for the losses they were likely to sustain. I may here remark, with respect to that mode of compensating the clergy, that it makes it necessary for them from time to time to go round to the different cemetery offices to look over the books, and to see what funerals have been brought from their respective parishes, to calculate the amount, and then to demand it of the officers of the company, which is not a very agreeable, nor, at times, a very easy task for the clergyman to perform; and, upon the whole, I fear that it will not be possible to secure the interests of the clergy effectually, but still it may be done to a considerable extent. While I am on the subject of cemeteries, I would remark, that a provision ought to be made

Right Rev. *Lord Bp. of London.*

5 May 1842.

(and this will be one of the difficulties of the case) for the funerals of the poor; as it is, they are much too expensive for poor people, and if they are obliged to carry the bodies of their friends to a distance in the country, in the present mode, it will become more so. There is, however, no expense so little thought of by the poor as the expense of a funeral. I have known repeated instances where they would deprive themselves of the necessaries of life for the sake of paying respect to the bodies of their departed friends; and I should be sorry that that feeling should be interfered with beyond a certain extent. I think by means of a cheap and decent kind of conveyance, of a hearse, that the expense of a funeral may be reduced, and if the poor do not object to avail themselves of it, that it may be done as cheap as their funerals are performed at present, if they are willing to dispense with what is called "a walking funeral." I think that it is wholly impossible to pass any law, the provisions of which (unless there be a latitude of application provided) shall be applicable to all parts of populous towns in the kingdom; what may be a very wise provision for the metropolis, or for any given populous town, may be found not to be applicable to another town with an amount of population nearly as great. I would take the liberty of mentioning one instance, that of my native town, Bury St. Edmund's, where there is but one churchyard for the whole of the town, containing about 11,000 inhabitants; and if you were to go merely by the rule of population, you would say that no funeral should take place in the town; but then that churchyard is very large; it is open on one side to the country, and will serve the purposes of the town for many years to come, without the slightest chance of detriment to the health of the inhabitants; therefore I think it must be left to the local authorities, acting upon certain principles, and under certain regulations laid down by law, to determine in what cases funerals shall be prohibited, and what provision shall be made for the interment of the dead. I do not think anything else occurs to me at the present moment, which I think it necessary to state, unless the Committee should like to hear the amount of burial fees in some of the parishes of London for the last three years.

2949. Without troubling your Lordship to read it, this may be appended to your evidence, unless you would wish the Committee to hear it now?—I would just wish, by way of illustrating my statement, to say, that a very large part of the income of the clergy in some cases depends upon the burial fees. The amount of the burial fees in St. George's, Hanover-square, was, in 1838, 597*l.* 17*s.*; in 1839, 423*l.* 8*s.* 2*d.*; and in 1840, 488*l.* 11*s.* 2*d.* In St. Giles-in-the-Fields, for three years, the amounts were, 764*l.* 16*s.* 6*d.*, 608*l.* 19*s.* 6*d.*, and 635*l.* 13*s.* 1*d.* St. George's, Bloomsbury, 273*l.* 7*s.* 6*d.*, 159*l.* 4*s.* 6*d.*, and 235*l.* 2*s.* St. Andrew's, Holborn, 306*l.* 0*s.* 1*d.*, 324*l.* 14*s.* 1*d.*, and 223*l.* 15*s.* 2*d.* Paddington, 494*l.* 14*s.*, 408*l.* 18*s.* and 425*l.* 4*s.*, and the average amount of the seven years preceding 1838 was 589*l.* and steadily increasing, and in 1841, it had fallen down to 398*l.* 6*s.* 4*d.*, owing to the cemeteries, although the population during that time had been increased by somewhere about a thousand. That shows merely the effect of the cemeteries. There are other similar instances which it is not necessary perhaps to mention; however, I will take one more, St. Margaret's, Westminster, 160*l.* 14*s.*, 115*l.* 1*s.* 6*d.*, and 128*l.* 0*s.* 8*d.*

2950. Colonel *Fox.*] Does that include the complimentary fees, or all the fees by law?—This includes everything, monuments and tablets too. This reminds me that the clergy would lose the fees upon monuments, and grave-stones, and tablets.

2951. There it is all included?—Yes; my objection was, that a large part of the clergymen's income depends upon the result, in some shape or other, of the burials.

2952. *Chairman.*] Would your Lordship wish to add anything more to what you have already stated?—I would wish to add only one set of figures to what I have already stated, which is the case of Christchurch, Spitalfields, where the gross income in 1838 of the living, the whole income of the living, was 410*l.* 6*s.* 7*d.*, of which the burial fees amounted to 199*l.* 8*s.*, leaving the income from other sources only 220*l.* 18*s.* 7*d.* with a population of 18,000. In 1839 the gross income was 429*l.* 17*s.*, the burials 179*l.* 5*s.* 6*d.*, leaving only 250*l.* 11*s.* 6*d.* from other sources; and in 1840, the gross income was only 389*l.* 5*s.* 10*d.*, the burial fees amounting to 174*l.* 2*s.* 6*d.*, leaving an income from other sources of 250*l.* 3*s.* 4*d.* I would take the liberty of adding one more instance to those I have

Right Rev. *Lord Bp. of London.*

5 May 1842.

have already given, as showing the effect of cemeteries upon the incomes of the clergy, and that is the case of St. James, Westminster. In 1838, which was after the cemeteries had begun to come into operation, the burial fees amounted to 128*l.*, in 1839 to 130*l.*, and in 1840 to 81*l.*, but in the six years preceding 1838, the yearly average was 405*l.* I have not at present anything more to say.

2953. You have nothing further to state to the Committee?—Not at present.

2954. When your Lordship observed, in the course of what you stated, that the clergy were ready to make some sacrifice for the purpose of bringing forward this desirable remedy of taking interments out of towns, did you apply that remark to the sacrifices of the present incumbents or to those who are to succeed?—I have no doubt that the present incumbents, when their incomes do not principally, or very materially, depend upon burial fees, would make some sacrifice, but I think it would be possible, at all events, to ensure it from those who succeed.

2955. Does your Lordship think it right for their successors to be called upon to make the sacrifice?—That would depend upon your leaving a sufficient amount to provide for the spiritual wants of the people; for instance, if by means of this change you cut down the income of the incumbent of a large parish so as to cripple his means of doing good, and so prevent him keeping up his charities, I should say that you would do more harm in one direction than you would do good in another. I have always very much lamented that any part of the income of the clergy depends upon fees of that kind, but it is impossible to prevent it, for we have no other source from which we can obtain it.

2956. These fees are the chief sources of the income of incumbents in large populous parishes?—In many cases.

2957. It is not so much so in country parishes to that extent?—Not unless they are populous parishes.

2958. You made an observation, that in some parishes a considerable source of profit arises from hat-bands and different little ornaments, scarves?—Yes.

2959. Supposing an union of parishes was made for the purpose of purchasing a piece of ground for the interment of their dead, and they had there a curate appointed with a certain stipend, for the express purpose of reading the funeral service over persons interred in that piece of ground, might it not be so arranged that still the incumbents of the several parishes from whence the deceased had been taken to be interred should possess the advantage of these fees, the curate reading the service having a stipend for that purpose?—It might be so arranged to a certain extent; but I am afraid that the fees would cease to be paid; that the complimentary fees which would be paid to the rector or the curate of the parish whose ministry the deceased had been in the habit of attending, would not be given to, or at least would not be so likely to be given for him to the officiating chaplain of the cemetery.

2960. The officiating chaplain would have the duty of reading the funeral service, and it would be still out of compliment, would it not, to the performance of that service that it would be given?—No; because, though it is a compliment for the performance of that duty, yet it is a personal compliment. There are cases in which it may be done as a matter of course, but by degrees the result would be a discontinuance of the practice altogether of giving those fees.

2961. I believe your lordship observed that one Bill could scarcely apply to the metropolis and to other large towns, and you mentioned as an instance, if a general enactment were made, that your native place would not want the application of that law; whereas other towns, perhaps with the same population, would require it?—Yes.

2962. Could not that be obviated by a local authority being placed in each town, or in each parish, for the purpose of administering the law in the event of it being called for?—I think I stated that there must be some persons on the spot to judge of the necessity of the case, and of the application of the remedy; but you must take care to guard their discretion, to confine it within tolerably strict limits, and the parties with whom the decision should rest, should be persons competent to judge of the whole question.

2963. Would your Lordship think that the incumbent of the parish with two churchwardens and three members of the vestry, would be a proper sort of local authority?—

Right Rev. *Lord Bp. of London.*

5 May 1842.

authority?—I think that the incumbent of the parish should be one party concerned, but I would not leave it in the breast of the incumbent to prevent a great improvement of that sort if he should think fit.

2964. But combined with the churchwardens?—I mean I would not leave it with the incumbent to prevent it; but in case of his refusal there should be an appeal, I should say to the bishop, to determine whether it was a case in which the remedy ought to be prevented, even though the incumbent might not think it fit.

2965. You have mentioned that monumental tablets, that the fees arising from them, would be lost to the incumbent?—Yes.

2966. Would it not be the same thing, assuming that burial-grounds were removed instead of being in the vicinity of a church, or near a church, to some distance; would not private vaults be made use of in burial-grounds over which monumental tablets would be erected, just in the same manner as in churchyards?—If cemeteries were parochial cemeteries, the rights of clergymen may be preserved; if that were the case, I think there should be a new arrangement altogether with respect to monumental fees, which in my opinion ought not to go into the pocket of the existing incumbent, but should form a fund for the benefit of the living. With respect to what you have said about a parochial union, it is a plan which I very strongly urged upon the clergy of London 10 years ago, and I desired them to consult their churchwardens about it, as being the best remedy that could be applied to the existing evil, and the most likely to secure them from loss, but the difficulty was too great at that time to be got over.

2967. Assuming that a piece of land for a cemetery was purchased by a parish, or by a parochial union of parishes, for the purpose of interment, and assuming that this piece of ground was purchased by a penny rate, or a rate to a certain amount raised upon the parish at large, would there be any objection to a portion of this ground being set apart for dissenters, or for people of any other religious denomination with this money so raised?—I do not see any objection to having a part unconsecrated, if any person should prefer being buried in such ground; of course it would not be for members of our Church; the clergy would be desirous that such persons should be buried in a different part. But it would be impossible to set apart one part of the ground for one sect, and another for another; you must have one part consecrated and one part unconsecrated in the cemetery for the interment of those who are, or are not in the communion of the Church of England.

2968. Your Lordship sees no objection to the principle, supposing the money to be obtained by a rate levied upon the parish, to its being applied in that manner?—I should say not; I see no objection in principle; at least no such objection as need interfere with a great public improvement. The Committee are aware, as the law now stands, that a parish may be required to purchase additional burial-ground where the churchyard is full; that the Church-building Commissioners may interfere, and may apply to the Court of Queen's Bench for a mandamus to compel parishes to purchase additional ground, and to make a rate for defraying the expense of it; and that power has been acted upon in several instances where we have been directly called upon by the parishes to use our powers.

2969. Can your Lordship give the Committee any instances where such was the case?—There was a case at Watford, in Hertfordshire, and Bishop's Stortford, also in Hertfordshire.

2970. Probably your Lordship is not aware of the fact that the Committee, on investigating last week, found that that has been acted upon in two parishes in this metropolis; one is St. Giles-in-the-Fields, and the other is St. James, Westminster; but in both those a Local Act was obliged to be prepared to enable the churchwardens and the parish authorities to raise money, and to invest that money in the purchase of a burial-ground. Now, admitting what your Lordship states no doubt to be correct, it does not appear to the Committee what necessity there would have been, if the law existed, to have passed a Local Act for that purpose?—The law did not exist; the law is more recent than either of those cases; that is one reason; and the other is, that in both those cases the burial-grounds were out of the parishes.

2971. Then the law, as it now stands, does authorize the purchase of ground out of the parish?—To the best of my recollection the ground must be in the parish;

Right Rev. *Lord Bp. of London.*

5 May 1842.

parish; but I cannot speak positively. At all events the law is not in such a state as to answer the purpose that the Committee have in view, because it is questionable whether the Commissioners could really exert their power if the parishes did not choose to obey. Those cases where we have exerted the power effectually, have been cases where the vestry have applied to us to empower them to raise a rate for this purpose; and where the parishes were willing to do it, charging the amount borrowed upon the rates as security.

2972. Now with regard to a general Legislative Act taking place, I think, from the tenor of your Lordship's observations, it would appear that if such an Act took place, the execution of that Act must be left to different local authorities?—I really am not quite prepared to give a positive opinion to such a question. There are so many interests involved, that I see the difficulty of passing an Act which shall not leave it to the discretion of the local authorities to apply it or not, as they deem fit. At the same time I see great difficulty even in that; but upon the whole, I think some plan of the sort must be adopted. I must add my own conviction, that in the case of the metropolis, the most important of all the cases, it would be extremely desirable that Government should take it into its own hands; that Government should provide a cemetery, and make such regulations as may be necessary, as Government does not want to be a gainer by the transaction; and the expense of purchasing lands for the cemetery, and preparing them for the purpose of interment, would in the course of a few years be repaid to the public, while at the same time the interests of the clergy would be protected.

2973. Would there not be some difficulty in carrying the measure into execution from this circumstance, that if the Government interfered, they must either apply the public money for that purpose or they must apply the parochial funds; and if they apply the public money, some difficulty might arise with the Chancellor of the Exchequer, and if they had to raise it by a parish rate by their own fiat, probably a good deal of discontent would be raised?—I alluded not to their ordering rates to be raised, but to their providing cemeteries either with the monies now in the hands of the Commissioners of Woods and Forests, or by a grant of public money to be repaid after a time: because if it answers the purpose of a cemetery company to buy and prepare ground, it would answer the purpose of Government to do it. The Government have lately purchased a considerable tract of land, a part of which, if it had not been designed for other purposes, would have been admirably adapted for a cemetery. The land situate to the north-east of Bethnal-green, which is to be called Victoria Park, and which the Government purchased with a large sum of money that happened to be in the hands of the Commissioners of Woods and Forests, would make a cemetery for the whole of the metropolis for the next hundred years; but I am glad to see it devoted to the benefit of the living rather than to the reception of the dead. I do not, however, think the two incompatible; I think you might form a cemetery and lay it out in such a manner as at Frankfort and other places, so as to make it a cheerful promenade. By cheerful, I mean an agreeable place.

2974. Does your Lordship think that cemetery would be sufficient for the whole of London?—No; for that part of London.

2975. Then your Lordship confines your attention to that district?—Yes; taking that end of the town, all the north and the east.

2976. Then your general opinion is, that some Legislative enactment is necessary?—Yes.

2977. Colonel *Fox.*] Would your Lordship think it improper to convey funerals by railway; and does your Lordship think there would be a feeling among the people against such a practice?—Oh, decidedly; and if you were to ask me why I consider it improper, perhaps I can say nothing more than that it is a matter of feeling; but I am sure a feeling would prevail among the middle and lower classes to a great extent; I myself should certainly have a strong feeling. At present we are not sufficiently habituated to that mode of travelling not to consider the hurry and bustle connected with it as inconsistent with the solemnity of a Christian funeral.

2978. Is your Lordship aware that very many instances, among persons of the middle classes, have occurred of their being sent by railway?—I have not heard of any. As far as the nature of the thing itself is concerned, there is no other objection than that which arises from the difference of going fast and

Right Rev. *Lord Bp. of London.*

5 May 1842.

going slow; but I am unwilling there should be any distinction between the rich and the poor.

2979. In the event of failing to obtain a large cemetery in the neighbourhood of the metropolis, does your Lordship think there would be any objection in placing quicklime with the bodies, so as to destroy the coffins within a certain space of time?—That again resolves itself entirely into a matter of feeling; for myself, I should not in the slightest degree object to being buried with quicklime.

2980. But does your Lordship think there would be any objection to it among the lower orders?—I can hardly say. It is impossible to judge of the feelings of persons, of the uneducated classes particularly: many persons are so extremely desirous that the bodies of their friends should be preserved to the latest possible day.

2981. Lord *Ashley.*] Your Lordship sees no other objection than as respects private feelings?—There can be no other objection, at least I do not apprehend there would be.

2982. Lord *Mahon.*] In the event of there being a cemetery, would your Lordship think it desirable to fix a maximum of distance, as well as a minimum, so as to guard the poor against loss of time and fatigue in attending distant funerals. The object of the question is to ascertain whether a great deal of fatigue might not arise from funerals taking place at too great a distance, and whether it would not be desirable to regulate the distance, so that it should not be too far as well as not too near the city?—The distance from what part?

2983. From the inhabited quarters?—Taking the case, London, one inhabited quarter will be three miles distant from another inhabited quarter. There must be some local authority as to where a cemetery should be.

2984. Your Lordship thinks some local authority?—Yes.

2985. It has been stated to the Committee that no increased expense to the poorer classes would take place from the cemeteries being placed at different distances; do you concur in that opinion?—If they will adopt the mode I mentioned some time ago, of a cheap conveyance of their friends, the expense probably would not be greater than that of a walking funeral in the town.

2986. What is your Lordship's opinion with regard to family vaults in towns under churches; would it be desirable, in the event of the formation of a cemetery of which we are speaking, to reserve family vaults, appropriating a number of vaults in the nature of family property, and bodies to be buried in leaden coffins, or do you think a general prohibition of interment in towns preferable?—I should be rather more inclined to preserve the right under certain limitations to family vaults; to members of a family within a certain degree of relationship, and with certain permissions.

2987. And an exception might be framed in the building of such vaults?—No; I would not fasten an exception to any general rule for making new vaults; I think there would always be interference with the feelings of some families; and sooner than an exception should interpose any difficulty to a general measure, I think it better to have no exceptions at all.

2988. Colonel *Fox.*] Do you not think it would be hardly possible for persons to be in vaults; would it not be considered as bearing hard upon the poor, that they would consider they would be acting unfairly towards their relations, because they could not be allowed to be buried in vaults owing to the money it would cost?—I am not speaking to that; I would not permit the construction of a new vault.

2989. Lord *Mahon.*] Your Lordship's answer applies to family vaults now in existence?—Yes; existing family vaults.

2990. Mr. *Cowper.*] Would you extend the exception of family vaults to the graves in churchyards in which the members of families have been accustomed to be deposited?—I see no objection at all to that, provided there is a sufficient number of feet of earth over the uppermost coffin.

2991. I apprehend the poorer classes who have been accustomed to see members of their family placed in the same spot, would be just as anxious that they should continue to be so placed, as the upper classes would be to have vaults under the churches?—They would in the country, and there would be no difficulty; but I do not think the feeling exists in the same degree among the inhabitants of large towns, or in London among the lower orders.

2992. Sir *Robert Harry Inglis.*] In reference to the recent answer of your Lordship,

Right Rev. *Lord Bp. of London.*

5 May 1842.

Lordship, as to the application of quicklime over and about the coffins, and in reference to your Lordship's observations in answer to a few questions before, as to your sense of duty, and paying the same regard to the funerals of the poor as to the funerals of the rich, so far as decency is concerned, do you consider that the upper classes of society would or would not, generally speaking, have the same objection which it has been represented to this Committee that persons uneducated generally would have to the application of the means of hastening the decomposition of the bodies of their relatives?—I believe the objection would be very general, and it is an objection connected, I must say, with some of the best feelings of our nature. It has always been characteristic of Christians to pay the utmost respect to the bodies of the deceased, as having been the tenement of the soul which is, we believe, to be re-united to it at the Judgment Day; and although after a time the tenement may be dispersed, and all must come to the same dust, yet there is a natural feeling of preserving that tenement as long as it can be, and I would avoid, as far as I could, any interference with feelings in any way connected with religion; at the same time I, myself, should not have the slightest objection.

2993. Your Lordship has referred to a plan of removing the bodies of the poor in a hearse if they could be prevailed upon, although your Lordship is of opinion they would prefer a walking funeral; do you conceive that in such a case more than one coffin ought to be placed in the same hearse?—I think not, certainly.

2994. If not more than one coffin ought to be placed in one hearse, is there any special objection to the parties following the hearse as a walking funeral?—If the distance be not too great; but in any case I think the mourners must be conveyed with the coffin.

2995. The object of removing the body upon a hearse is of course to relieve the family, or the parish, or the union, as the case may hereafter be, of the expense of bearers?—Yes.

2996. Then it would not prevent the parties attending, as a walking funeral, with that exception?—Why, yes, it would, if the distance is considerable; and my notion of a funeral conveyance is one which should at the same time convey the corpse and the mourners.

2997. Sir *William Clay.*] Your Lordship has referred to an Act for establishing a cemetery in the neighbourhood of Westminster, called the Westminster Cemetery Company?—Yes.

2998. And in that Act your Lordship stated, there was a fee of 10*s.* payable to the clergyman of the parish, upon burials taking place of all persons dying within the parish?—Yes.

2999. It would appear by reference to the Act, that that provision is limited to bodies buried within the consecrated portion of the cemetery?—I do not recollect whether that was so or not.

3000. I would wish to ask whether your Lordship, in any general Act for burying bodies without the precincts of populous places, would wish to limit the fees to be given to clergymen as they are limited by that Act, namely, to bodies buried in a consecrated portion of the new burying-ground?—I do not wish fees to be paid to clergymen upon the funerals of Dissenters whose friends choose to bury them in unconsecrated ground, but what I wish to avoid is, holding out a premium to the middle and poorer classes to be buried, being members of the Church of England, in unconsecrated ground, where they would not pay the fees which are usually payable to the clergyman; and, therefore, I should wish, if it were possible, that some fees should be payable to the authorities who regulate the cemetery, for all funerals, but fees payable to the clergy should be only for those buried in consecrated ground.

3001. With reference to the sum that was fixed by the Act in question, of 10*s.*, your Lordship is, perhaps, aware, that in Acts that have been passed since, for instance, that for establishing a cemetery within the Tower Hamlets, there were different fees, and of a smaller amount?—Yes; I think there are two classes of fees in the Tower Hamlets.

3002. In the Cemetery Bill which was passed in January 1841, for establishing a cemetery in the parishes of St. Dunstan's, Stepney, and St. Leonard's, Bromley, the fees to be received by the clergy are, for every corpse interred in a vault, catacomb, or brick grave, 7*s.* 6*d.*; and for every corpse, except a pauper burial, the sum of 2*s.* 6*d.*?—Yes.

Right Rev. *Lord Bp. of London.*

5 May 1842.

3003. Are the Committee to understand that, in your former suggestion of an indemnity to be provided for the clergy, your Lordship wished to suggest that 10*s.* was the proper sum?—No, I did not.

3004. You did not wish the Committee to understand that?—No; I only mentioned, that in the different cemeteries that different fees had been set apart. In the first instance, at Kensal-green there was quite an inadequate compensation. In the second, the Westminster and London Cemetery, it was considered by the clergy, on the whole, to be a reasonable compensation. But, in the third, to which you have just alluded, the Tower Hamlets Cemetery, it was settled by me, after a conference with the clergy; that being a part of London from which funerals would be, generally speaking, of a different class from those sent to Kensal-green and to the London and Westminster Cemetery.

3005. Then the Committee are not to understand your Lordship absolutely to say that it is a subject on which you have made up your mind, as to the specific sums and fees that it would be fair and proper for the clergy to receive?—No; I am not prepared to say that.

3006. On referring to one portion of your Lordship's evidence, I think you stated that the Committee were already probably aware of a compulsory power in the Commissioners for promoting the building of additional churches, to call upon parishes to provide ground for burial purposes?—I did not mean quite to state that there existed in the full sense a compulsory power, although the Commissioners have a power by law to call upon parishes; I stated afterwards, I believe, that we had exercised the power in cases where we have been called upon to do it by the parishes themselves.

3007. By the 59th Geo. 3, it would appear there is such a power in the Commissioners?—It was intended there should be.

3008. Upon what ground does your Lordship conceive that there is any defect or imperfection in such powers?—Because the mode of proceeding would be by an application for a mandamus to the parish, and we were advised by the best legal authority, that it was very doubtful, if the parish resisted, whether the court would grant the mandamus.

3009. There seems to be some doubt also, from what your Lordship has stated, whether the ground to be provided might be without the bounds of the parish to which the power was intended to refer?—Yes.

3010. The Committee understand your Lordship to state that that doubt also exists?—I think it also exists; I do not think it is alluded to by the Act; it does not say it must be within the parish.

3011. But then, by the 3 Geo. 4, the Committee perceive that the Commissioners have power to authorise the construction of new burial-grounds without the precincts of the parishes, upon application of the parish authorities?—Which Act is that?

3012. By the 3 Geo. 4, s. 26?—Yes, there is that Act, I had forgotten it; upon an application of the parish authorities.

3013. The Committee would probably be justified in inferring from what has fallen from your Lordship, that you would think it better that the evil into which the Committee are inquiring should be remedied by some general Act, rather than by an extension of the powers of the Church-building Commissioners?—I am not prepared to say that, and for a good reason; perhaps I may take the liberty of stating that we have been engaged now for some months in endeavouring to consolidate the eight Church-building Acts into one, and we certainly propose in that Act to take a more clearly defined power of calling upon parishes to provide additional burial-grounds, and my own opinion is, that if you should think it desirable to have the control or direction of anything like a central authority, you could not entrust it to better hands than those of the Church-building Commissioners.

3014. Supposing the recommendation of the Committee should go fully to the extent of forbidding, after a period to be named, any interment of bodies within the precincts of populous towns, would your Lordship conceive that in such a case the Commissioners would be willing to undertake, or that it would be convenient to them to undertake, so large an addition to their present functions as carrying a general Act of that kind into effect?—You cannot all at once prohibit all interments within the precincts of towns. There may be burial-grounds within the precincts of towns, as, for instance, the case to which I alluded of Bury St. Edmund's, where it happens that the churchyard is open

Right Rev. *Lord Bp. of London.*

5 May 1842.

to the country on one side, and where there is sufficient room for continual burials, and where they could want no additional space for a long time to come; that is one point. You must have some authority appointed by the Act to determine; you cannot define in the Act all cases in which interments should be prohibited, and in which the Act should be applied. I think the Commissioners would be prepared to undertake that which probably, after all, will not be very onerous, and which I apprehend when done once is done for all, for each particular case; because, after all, the cases are not so numerous; it is only dealing with 10 or 12 large towns, some of which are already provided for sufficiently, such as Liverpool and Glasgow; therefore, as far as the Church-building Commissioners are concerned, although they have still a good deal of work to do, yet I think they would have no hesitation in undertaking that responsibility.

3015. Mr. *Vernon.*] Are complimentary fees to clergymen usual in the middle classes of society?—It is usual in London, where the residents are respectable tradesmen.

3016. Does the fee usually pass as between individual and individual, or does it pass through the undertaker, as a part of the funeral charge?—I think the practice is not, with regard to the class to which you have alluded, to give complimentary fees; they give fittings, but there is a good understanding between the undertaker and the clergyman, generally, as to the fittings. In some instances I have known them amount to pounds; the clergyman's complimentary fee is substituted for the fittings. It depends much upon the class of persons: if a vicar goes, he gets a hat-band and a scarf, and for that hat-band and scarf 10*s.* are placed in the hands of the clergyman, so that, in fact, complimentary fees is the real form in which it is received.

3017. When they give fittings, is not the expense to the party more than commensurate with the advantage to the clergymen?—Yes. An undertaker charges more than a clergyman receives, and there are very many flagrant cases of that.

3018. Then a smaller amount of payment by the individual, for the benefit of the clergyman, would be satisfactory to the individual, without injuring the clergyman?—I should think so.

3019. The churchyards of London being, as it is shown by the evidence, inconveniently full, is it not a natural and necessary result that a great proportion of the interments are driven elsewhere?—I should think so.

3020. To private burial-grounds, for example, as well within as without the metropolis?—Yes, of a certain class; the middle classes of society, I think, do not resort to those private burial-grounds, but the lower classes do.

3021. Is not the diminution of the fees which appear to have occurred in respect of the several parishes which your Lordship has adverted to in London, to be accounted for by the state of the churchyards being now inconveniently full?—I do not think a sufficient change has taken place in that respect within the last seven or eight years to account for that.

3022. If churchyards should be provided for the benefit of parishes out of the metropolis, would not the inconvenience to the clergyman of attending to the duties in those churchyards be considerable?—Undoubtedly, if they were to do it themselves.

3023. They are therefore subjected at present, by the nature of the thing, to inconvenience, and to a loss of income derived from the locality, and from the crowded state of their churchyards; would not, therefore, even a smaller compensation than the actual sum which they derive from the cemeteries, be a competent compensation under those circumstances?—We have proceeded upon that principle in fixing a certain compensation to be given to them under the different cemetery Acts; we have taken into account all those particulars.

3024. Supposing a general measure were to pass prohibiting interments within the churchyards of the metropolis, and compelling interments by the clergy to be in cemeteries outside the metropolis, would it not be right that all interments should be prohibited, private as well as public?—Undoubtedly, because you have some security that there shall be no impropriety in these public cemeteries, but not so in the case of private ones.

3025. Mr. *Evelyn Denison.*] In the event of a cemetery being established near this metropolis, it appears to be quite necessary that some conveyance should be employed other than bearers for carrying the bodies; do you think it would be

Right Rev. *Lord Bp. of London.*

5 May 1842.

possible, without offending the feelings of the people, under those circumstances that more than one coffin should be conveyed, at least as far as the cemetery, at the same time, in one and the same conveyance?—I can hardly give a positive opinion, without trying the experiment. It is impossible to say beforehand what the feelings of the poorer classes would be with regard to the particular mode.

3026. The question is asked your Lordship in consequence of the answer which you gave to a question put to you, wherein you stated that you thought they would object to be buried in that manner?—Certainly; my impression is, that they would object to such a mode. It might sometimes happen that persons of opposite characters might be carried in the same conveyance; for instance, the body of some profligate spendthrift might be placed in a conveyance with the body of some respectable member of the church, which would shock the feelings of his friends; and however poor they might be, I think they would feel a pride that their relations should not be conveyed to the place of interment in the same carriage with the body of such a man.

3027. Mr. *Henry Redhead Yorke.*] Has it fallen within your Lordship's knowledge to learn, that from the expense of burial, people have been otherwise disposed of; that is to say, they have not been buried at all?—I have had no opportunity of judging of that at all; I never have had reason to suppose that such a thing occurred in my own parish.

3028. Your Lordship said it was to be lamented, if I understood you rightly, that the clergy should derive their income from burial-fees, or from other sources?—I said, generally speaking, it was to be lamented that clergymen should derive their income from any precarious source, and particularly from any source that calls for payment in the shape of fees from the poor.

3029. Does your Lordship think that the principle of the proposed enactment will rectify that source of revenue, without diminishing the emoluments of the clergy?—I do not think it would be impossible. I am not prepared to say that; but I think it would diminish the evil. I believe, in all cases, they would be disposed to take a fair average compensation for those precarious fees.

3029*. Is your Lordship aware of the crowded state of the churchyard at Paddington?—The burial-ground at Paddington was enlarged by a considerable addition 10 or 12 years ago, and they have lately purchased an additional plot of ground for that purpose from an estate which belonged to the See of London—at least of part—which I would gladly have given them, but I was not at liberty to do so.

3030. Mr. *Evelyn Denison.*] It seems in the parish of St. Giles's the fees have been kept up in consequence of the churchwardens having purchased some land 40 years ago for a new burial-ground?—Yes.

3031. They have been enabled in consequence of that to keep up the amount of their fees?—Yes; there is one other remark that I would wish to be permitted to make: I do not know how far it is practicable; but in defending the interests of the clergy in this question, I think it right to put in a word for another class of men, that is, the existing order of parish clerks, and if it be possible to prevent them from being serious losers, I shall be glad, because they are a very respectable body of men in London, and their means are small. Of course their case is not quite the same as it is with regard to the clergy; I think a petition from that body has been referred to the Committee; and I should not like to leave without putting in a word, as Bishop of the diocese, for them, in case anything can be done: their rights have been protected to a certain extent in the different Church-building Acts. The case of the sexton is different; he is a labourer in the service of the parish, and has not the same claim as the clerk has; the sexton is paid for work done the same as any other labourer.

[*The following List of Burial Fees was then handed in:*]

——	1838.	1839.	1840.
	£. s. d.	£. s. d.	£. s. d.
St. James, Westminster - - -	329 – –	298 – –	246 – –*
St. Botolph, Bishopsgate - - -	36 1 2	42 7 2	23 9 10
St. George-the-Martyr - - -	70 12 6	59 5 10	59 – 8

* In the six preceding years the yearly average was £. 405.

Right Rev. *Lord Bp. of London.*

5 May 1842.

	1838.	1839.	1840.
	£. s. d.	£. s. d.	£. s. d.
St. John, Westminster	123 7 –	93 19 8	105 13 7
St. George-in-the East	101 15 –	101 8 6	74 8 6
St. Bride	51 6 8	51 2 –	81 2 4*
St. Margaret, Westminster	160 14 –	115 1 6	128 – 8
St. Giles-in-the-Fields	764 16 6	608 19 6	635 13 –
St. Dunstan, Westminster	39 9 2	24 – 8	35 5 10
St. Clement Danes	121 14 9	112 19 10	86 3 4
Bethnal Green	71 4 –	67 4 –	62 3 6
St. George, Bloomsbury	273 7 6	159 4 6	235 2 –
St. Botolph, Aldersgate	60 8 4	58 2 8	45 10 –
St. George, Hanover-square	597 17 –	423 8 2	488 11 2
St. Giles, Cripplegate	87 9 6	66 6 10	56 14 10
St. Sepulchre	80 16 6	66 8 –	72 6 –†
St. Andrew, Holborn	306 – 1	324 14 1	223 15 2
St. Catherine Cree	75 3 6	43 16 6	56 13 6
St. Olave, Hart-street	60 8 –	37 4 –	32 2 –
Allhallows, Barking	31 19 6	7 19 –	15 16 6
Paddington	494 14 –	404 18 –	425 4 –‡
Kensington	216 13 6	154 9 4	254 13 6
St. Marylebone	589 17 6	548 15 4	516 11 –

* Increase of 1840, from two tablets.

† One hundred fewer interments than in the three preceding years.

‡ Average amount of seven years preceding 1838, was £.589, increasing; loss £.200. per annum.

N. B.—This list specifies only the clergyman's fees; not those paid to the churchwardens, clerk, or sexton.

APPENDIX.

CORRESPONDENCE.

Rev. *H. J. Knapp*, D.D. to *W. A. Mackinnon*, Esq. M.P.

Correspondence.

Dear Sir, Vicarage, Willesden, 4 May 1842.

As your distinguished and most assiduous Committee will, I apprehend, proceed with the other points of inquiry which you had proposed, permit me to state a few ideas which have occurred to me, and may be moulded in the shape of interrogatories as circumstances may arise.

Are the fees for funerals paid to the clergy and clerks authorized by the Church or by Acts of Parliament, or simply by usage or agreements between the clergy and their parishioners? Are the tables of fees drawn up from resolutions of vestry, and sanctioned by magistrates? Are the prices charged for vaults in churches or churchyards, for monuments and tablets, fixed and sanctioned by any authority, or left to the discretion of the incumbent? If a compensation is made to the present incumbents, should it be continued to their successors? What proportion of the fees for funerals should be allowed to the present incumbents and clerks; half or two-thirds, or the same allowances as are paid by the cemeteries to the incumbents of those parishes which the deceased are brought from? What allowance, if any, should be given to successive incumbents? When the funerals will cease, will not less ministerial assistance be required, consequently less expense fall on the incumbent?

In providing for the funerals of the poor, should an allowance be applied and hoped for from Government, or should the respective parishes provide for them? From what fund could that proceed; houses or lands bequeathed for the benefit of the poor, or by a rate on the rental? In the purchase of land for burials, should not several parishes, cordons, or districts, join and endeavour to buy it at a moderate price? Might not a cheap contract be entered into for the conveyance of the poor? Might not expense be saved by a suitable conveyance by canal or railroad? Might not the expenses of burying the poor be met and more than defrayed by the fees charged to others? Is there not Government land in different places out of town, which might be granted to the different parishes or unions of parishes, for their burial requirements? In carrying out the purposes of the Legislature, should not one general Act be passed, without putting each parish to the expenses of a separate local one, proper evidence being shown of the necessity for additional burial-ground?

I may presume that no more proofs need be adduced of the abominable nuisance to be removed; otherwise abundance in addition could be brought forward, as regards especially Cripplegate, Aldgate, Shoreditch, Spitalfields, &c. &c. I will only mention two which have lately come to my knowledge. The churchyard of Allhallows Staining is scarcely a rood in size; yet 60 bodies on an average are every year deposited in it: the church was built at least 300 years before the Fire of London. Allhallows Barking churchyard, likewise very small, has had, during the last 40 years, about 3,000 bodies buried in it. I conversed a few days ago with two French gentlemen, going to visit Kensal Green cemetery, and when I mentioned the state of, and proceedings in our metropolitan churches and churchyards, they exclaimed "*Oh! quelle horreur!*" They informed me that burials are not now permitted in Paris, and that no grave is opened under five years.

I am &c.
H. J. Knapp.

W. F. Chambers, M.D. to *W. A. Mackinnon*, Esq. M.P.

My dear Sir, 46, Brook-street, 2 May 1842.

Practically I know nothing of the effect of burying-grounds or their vicinities. I have no doubt, however, that the fevers which are called typhus, even in this cleanly quarter of London, owe their origin to the escape of putrid miasmata from sewers, drains, and similar sources of pollution.

I should presume that overcrowded burying-grounds would supply such effluvia most abundantly.

Believe me, &c.
W. F. Chambers, M. D.

C. J. Sadler, Ald. and J.P., to *W. A. Mackinnon*, Esq. M.P.

Sir, Oxford, 30 April 1842.

I SHALL feel obliged by your informing me if any Report has been made from the Committee (of which you are Chairman) appointed by the House of Commons to inquire into the practice of burying in cities and towns.

I have for some time past taken an interest in this subject, from the fact that eight out of 12 of our churchyards are inconveniently filled; and in 1837, when I served the office of chief magistrate, I called several meetings of the local clergy and parochial officers, to endeavour to establish a cemetery near our city; but petty jealousies prevailed, and the subject dropped.

I shall bring the matter forward at the next meeting of the town council (in about eight days), and should feel thankful to know the result of the labours of your Committee, if they have been reported to The House.

I am, &c.

C. J. Sadler, Ald. and J. P.

R. F. Forrester, M.D. to *W. A. Mackinnon*, Esq. M.P.

Sir, Derby, 30 April 1842.

As senior physician and magistrate, I beg leave to make the following communication. The population of Derby having very greatly increased, it has for some time past been quite obvious that the old churchyards could no longer contain the number of bodies brought to them for interment, without disturbing the remains of those who had preceded them, before decomposition had taken place. This practice, both revolting to the good feelings, and injurious to the health of the inhabitants, having some years ago already attracted a good deal of attention, additions were made in three parishes to the existing churchyards, at a considerable expense. This, however, has proved a very inadequate remedy for the evils of which we have had to complain, and in consequence an attempt was made about two years ago to establish a cemetery in a spot adjacent to the town, which proved abortive, for reasons which it is immaterial to mention. A very important object may ere long be effected, conducive at once to the preservation of the general health, and of that decent respect for the ashes of the dead which is paid even by the least civilised people.

I have, &c.

R. F. Forrester.

Shewbridge Connor, M.D. to *W. A. Mackinnon*, Esq. M.P.

Sir, Carlow, 29 April 1842.

OWING to absence on professional business, your letter was not received until the 24th. I hasten to reply, and beg to say that the same remarks are applicable to very many cities and towns in Ireland.

The churchyard of Carlow is in the centre of the town, and so closely surrounded by tenements, that in places the wall of the dwelling-house, often loosely built, alone divides the bed of the occupant from the (perhaps newly tenanted) grave; this, although rendering the air sufficiently insalubrious, is not the only cause of impurity, as the annual decay of noxious plants, luxuriant in a place so rank and untrodden as our graveyards, universally neglected, are, where vegetable decomposition above ground is as much a consequence as animal decay beneath, injures most seriously the surrounding atmosphere.

Many cases of consumption have been said to arise from breathing the air for years in those houses, (and there is justice in the expression,) as it is mixed with gases, a small addition of which renders the atmosphere insufficient to support animal life. There is no doubt, that the habitual respiration of, or even contact with air so impure, is a powerful means of augmenting the hereditary disposition to scrophula so prevalent in this country, or even of originating it, and though we have no proof of it, it is reasonable to suppose that the water supplied to the inhabitants, by the pumps sunk on premises in the precincts of the graveyards, has not long since percolated the ashes or washed the remains of departed relatives; the idea at least is not agreeable, though the water may be pretty good.

Allow me to show another consequence of having graveyards in or very near towns. An old graveyard near the one above described, of about one and a half or two acres in extent, in the memory of man was appropriately filled with tombstones, monuments, &c., but in consequence of the value of building ground it has been gradually encroached upon, and so covered by houses, stores, &c., that it has become the spot of greatest trade in Carlow. One spot, 12 feet square, from the watchful care of some interested persons, alone remains in its original state apparently, but even this has been excavated, and converted into a vault, it is believed for the purpose of illicit malting. The Ecclesiastical Commissioners have instituted a suit for the recovery of some of this ground. So far as the health of the town is concerned, the change is not to be lamented, but in this enlightened land some respect should be paid to the places of sepulture, as different from the superstitious reverence of the Indian, as from the carelessness observable in Ireland, where the state of the graveyards is generally disgusting.

Typhus fever in a severe form is constantly present in this town; though not the cause, I have no hesitation in stating the graveyard to be a cause, and not a minor cause, of the atmospheric impurity that tends to nourish and produce the disease, and that in no possible light can it be looked on as ornamental, useful, or in the least desirable in its present situation.

Correspondence.

Trusting that I have written satisfactorily, and not at too great length, and begging your attention to the other page about "health of towns" and preservation of life,

I remain, &c.

Shewbridge Connor, M. D.
Fellow, Col. Physician, &c. &c.
Physician to Carlow Fever Hospital, &c. &c.

W. M. Tartt, Esq. to *W. A. Mackinnon*, Esq. M.P.

Sir, Springfield, Lyme Regis, 28 April 1842.

In reference to the subject of your inquiry, the statistics of Lyme Regis are as follows:

For a population of 2,757 inhabitants, the principal burial-ground is that of the parish church; its extent is rather more than half an acre, and it is so far crowded that persons employed in interments are of opinion that the bodies buried there are disturbed, to make room for others, in from seven to fourteen years. Interments are also made in the vaults of the church, though recently it is only permitted in leaden coffins, and checked as much as possible by high fees. Still, however, many are of opinion that prejudicial effluvia proceed occasionally from these vaults.

In addition to the above, there are also very small burial-grounds attached to the Wesleyan, Baptist, and Independent chapels; and another, I understand, is about to be consecrated for the Roman-catholics.

All these are within the precincts of the town; and the registrar's statement of the total number of burials is,

From July 1837 to 31 December	17
In 1838	62
In 1839	38
In 1840	45
In 1841	45
And to this date, 1842	12

being an average of about 45 per annum.

I have, &c.
W. M. Tartt, Mayor.

John Haviland, M. D. to *W. A. Mackinnon*, Esq. M. P.

Sir, Cambridge, 27 April 1842.

I have nothing to add to Mr. Fisher's Report, but I may observe, that the position of many of the most crowded churchyards is the worst possible, they being situated in the very heart of the town, and surrounded by lofty buildings. The incumbent of one of the parishes has informed me that his sexton has been compelled to disinter half-decayed coffins, with their contents, in order to make room for other fresh burials, by digging deeper in the soil. The state of the burying-grounds in this town is most offensive, demoralizing, and injurious to the health of the inhabitants.

I have, &c.
John Haviland, M. D.

W. O'B. Adams, M. D. to *W. A. Mackinnon*, Esq. M. P.

Dear Sir, Adelaide Street, Kingstown, 25 April 1842.

I regret not having more information to give you on the inexpediency of allowing interments within town or cities, on which subject I think there can be but one opinion. From the crowded state of the churchyards, when in making a new grave, bones, &c. are thrown up, it is customary to burn them, the smell from which is really most offensive, insomuch that it renders the houses on one side of Blackhall-street (as the churchyard I allude to in particular is Paul's) most disagreeable, but to what exact extent it deteriorates their value I am unable to say, and it would take longer time to ascertain than I would like to occupy before answering your letter. I send you some reports, all I could procure, of the Dublin General Cemetery, situated at Harold's Cross, near Dublin; it is a very beautiful cemetery, and as a mercantile speculation promises to pay well; it was set on foot in the year 1837. I also inclose you a copy of a petition against the establishment of the foregoing cemetery, from the committee for conducting the two Roman-catholic cemeteries situated at Golden Bridge, and Prospect, and completely under the management and for the use of our Roman-catholic brethren. It might be difficult to point out the amount of injury done to the health of the inhabitants of cities or towns by allowing interments within their precincts, but of which I think there can be little doubt. Should I be able to procure information on this subject worthy of communicating, I shall have great pleasure in doing so.

Believe me, &c.
W. O'B. Adams, M. D.

Thomas Fitzpatrick, M. D. to *W. A. Mackinnon*, Esq. M. P.

Sir, Park Street, Dublin, 25 April 1842.

As in an investigation such as you are prosecuting, every authentic fact bears some value, I beg to bring under the notice of the Committee the following circumstances demonstrative of the abominations consequent on the frequent re-opening of graves. In

1835 I attended the funeral of a lady to St. Bride's churchyard, in this city: on arriving there I was surprised to see a coffin on the ground tied with ropes, and in so shattered a condition as to permit a partial view of the body which it contained. On making inquiry, I ascertained from one of the attendants, that owing to the crowded state of the churchyard, it was necessary to lift up this coffin in order to make room for that of the lady, and while they were removing it to a short distance it broke asunder, and the body, in an advanced stage of putrefaction, fell to the earth, creating so disgusting an effluvia as obliged the gravediggers to retire to a distance. On the occasion alluded to, a gentleman and I recognised the head of a friend who had been interred in the same grave two years previously; the muscles and the lower jaw were removed, but the scalp being perfect, the peculiarity of the hair and the formation of the skull satisfied us of its identity. Thus, Sir, independent of the question as to the influence of noxious emanations from decomposed bodies on the already loaded atmosphere of cities and large towns, some of the best feelings of human nature are outraged by such profanation of the grave, and by the indignities offered to the remains of those who during life were esteemed and loved. Every man of well-regulated mind must wish for the prevention of such abuses, and this object can only be attained by the establishment of extensive cemeteries, thereby removing the necessity of re-opening graves, until at least such changes were effected as would prevent identification of the body or the production of noxious effluvia.

I have, &c.

Thomas Fitzpatrick, M. D.

Henry Lonsdale, M. D. to *W. A. Mackinnon*, Esq. M.P.

Sir, Edinburgh, 24 April 1842.

Medical men, almost without exception, have assigned to the putrescent exhalations from crowded cemeteries one of the causes of disease amongst the population of large towns, especially when the disease, such as fever, assumes an epidemic form in the neighbourhood of these cemeteries. This seems to be well understood by the public in general, who invariably shun, if their circumstances permit, the dwellings adjacent to burial-grounds. At the same time, it is well to remember that this reluctance to live in such dwellings may depend on other circumstances beyond the physical objections of putrid effluvia.

The observations made in London, Glasgow, and Liverpool, would tend to the belief that disease is engendered by too close approximation to public cemeteries; but the statistical information which we possess is too scanty to guarantee our stating that the health of individuals is necessarily affected by living in the vicinity of burial-grounds.

That the effluvia arising from putrid human remains, as seen in our anatomical rooms, have an injurious effect on the health of many who are obliged to study in them, appears to me, from several years' experience, to be quite decided.

Few but the very zealous student will continue more than two or three hours at their labours. Disordered digestion, &c. &c. almost invariably attack those whose attendance is protracted beyond that time, unless where the person has become habituated by long practice.

We would naturally infer, that if the strictly professional, who look upon anatomy as a *sine qua non* in the study of medicine, are so affected, the influences would be more deteriorating to the non-professional, should they be exposed to a less vicious atmosphere.

It would appear to me that the physical circumstances ought not to form the sole object of inquiry, when the improvement of towns is under consideration, as the removal of cemeteries to some distance from towns where architectural taste, &c. &c. can be displayed, seems to have a happy moral effect on the inhabitants.

In conclusion, I beg to state my regret that time and other circumstances already alluded to, prevent me detailing many facts which might bear on the important subject which you and your honourable colleagues are engaged in elucidating. That your labours may be crowned with success is the fervent wish of, Sir,

Your's, &c.

Henry Lonsdale, M. D.

G. G. Mounsey, Esq. to *W. A. Mackinnon*, Esq. M.P.

Sir, Carlisle, 23 April 1842.

I am not aware of any particular circumstances here relative to the subject of your letter of the 7th.

In Carlisle there were, until within a very few years last past, only two burial-grounds, both in the heart of the city, the crowded state of which frequently caused most revolting exposures, and in hot weather very disagreeable effects. Two small additional burial-grounds were provided, eight or ten years since, in the suburbs; but they are filling very rapidly, and the town extending around them.

It is generally thought that, if powers were given for establishing cemeteries, they would speedily be provided in the vicinity of the town, and a great improvement in the health of the place thereby effected.

I have, &c.

G. G. Mounsey, Mayor.

Correspondence.

George Fisher, Esq. to *W. A. Mackinnon*, Esq. M.P.

Sir, Cambridge, 23 April 1842.

I BEG to inclose you a return of the state and extent of the burial-grounds in this town, from which will be seen the pressing necessity of a public cemetery being provided.

It would be painful to state, in detail, the distressing scenes which frequently take place in many of the churchyards of this town, owing to the necessary exhumation of bodies (many comparatively but recently interred), for the purpose of making room for new interments.

It may be also remarked, that most of our churchyards are closely surrounded by dwelling-houses, from which the health and comfort of the persons inhabiting them cannot but be considered as seriously affected.

For several years past attempts have been made to remedy these evils, by endeavours to procure a place for a public cemetery; but, owing to the great difficulty of obtaining a piece of ground suitable for that purpose, and from other causes, as to the arrangement of the ground, even if it could have been procured, nothing effectual has hitherto been done.

Of late the corporation has taken the matter into consideration, and had appointed a committee to accomplish, if possible, this object; but, up to the present time, that committee has been unable to carry any plan into effect; and, indeed, I am fearful nothing can be done here (although there is no town which requires it more), except by a public measure originating in Parliament, owing to the difficulties regarding the arrangements.

You would have had an earlier answer from me, but the returns have only just been completed.

I shall be happy to give you any further information, should you require it.

I have, &c.

George Fisher, Mayor.

RETURNS made on the 21st April 1842, by the Clergy and Churchwardens of the several Parishes in the Borough of *Cambridge*, relative to the State and Extent of the CHURCHYARDS within the said Borough; together with a Return from the Dissenting Ministers officiating in the Town, relative to the Burial-Grounds attached to their Chapels.

PARISHES.	Population.	Extent of Churchyard in Square Yards.	Unoccupied Space in the Churchyard.	Probable Number of Interments for which the Unoccupied Space would serve.	Average Number of Burials per Annum, for Three Years, ending with the Year 1841.	Number of Interments within the Church during the same time.
All Saints	1,231	638	nil.	nil.	23	3
St. Andrew the Great	1,983	790	nil.	nil.	45	2
St. Andrew the Less	9,238	Old Church, 1,872 New Church, 1,472	Old Church, 297 sq. yards. New Church, 1,344 ditto.	Old Church, 128 New Church, only 300, as none but brick graves are allowed in it.	132	nil.
St. Benedict*	932	670	nil.	nil.	18⅔	nil.*
St. Botolph	723	1,666	230 sq. yards.	about 100	22⅓	nil.
St. Clement	1,039	1,200	nil.	nil.	34	nil.
St. Edward	619	600	nil.	nil.	17⅔	nil.
St. Giles	2,087	1,360	nil.	nil.	58	nil.
St. Mary-the-Great	1,013	1,040	A few yards	24	24	nil.
St. Mary-the-Less	704	2,662	Ample space for interments		23	1
St. Michael	432	968	About 244 square yards.	105	8	nil.
St. Peter	627	1,150	nil.	nil.	18	nil.
Holy Sepulchre	638	1,534	nil.	nil.	15	2
Holy Trinity	2,189	1,000	nil.	nil.	52	1

Ground attached to the Meeting-house in Downing-street. } None. But in the chapel three persons have been interred within the last 22 years.

Burial-ground attached to the Meeting-house in St. Andrew's-street. } A small space probably sufficient for from 60 to 70 interments. The average number of burials three per annum.

Cambridge, 23 April 1842.

George Fisher,
Mayor of Cambridge.

* Addenbroke's Hospital being situate in this Parish, the patients who die there are generally buried in this churchyard.

J. Kidd, Esq. to *W. A. Mackinnon*, Esq. M. P.

Sir, Oxford, Friday, 22 April 1842.

I UNDERSTAND that, with a very few exceptions, the churchyards in Oxford are so occupied, that in the course of 15 or 20 years there will be a difficulty in finding room for burials. I also understand that, with the view of obviating this inconvenience, several meetings of the inhabitants of Oxford took place some years since; and that though they could not agree upon any plan, there was a strong desire, and that desire is still prevailing, to obtain a spot of ground in the vicinity, for the purposes of a public cemetery.

I shall bear it in mind to obtain further information, if in my power; but I am happy in adding, that several active members of the borough are engaged in obtaining information on the same subject; for they will be able to obtain it more readily than I could.

I beg leave to subscribe myself, Sir, &c.

J. Kidd.

Peter Dickson, Esq. to *W. A. Mackinnon*, Esq. M. P.

Sir, York Buildings, Southampton, 20 April 1842.

YOUR letter, dated House of Commons, 7 April 1842, reached my residence by the post yesterday, being the 19th April 1842, on the subject of the Committee for the Improvement in the Health of Towns, and requiring information respecting Southampton. So far as respects the very crowded and disgraceful state of the general burial-ground in St. Mary's parish of this town, which is appropriated for the interment of the dead from all the united parishes of Southampton, I state the fact of its being quite full, and the unsuccessful attempt of our town council to apply to Parliament for a Cemetery Bill, the town council having offered 22 acres of Southampton Common (of which they are lords of the manor), with every advantage of its being a free gift, to the whole inhabitants of Southampton; and relying on the sale of vaults and graves to the rich, to be capable of paying the expenses of the Act of Parliament, and the enclosure of the land, and consecrating the same, it was calculated that the poor were to have every benefit that could result from such arrangement, the town council disclaiming all and every intention to make any profit whatever from the proposed cemetery. The Radicals at the vestry meetings refused this boon, and they are now at a loss for a burial-ground in or near our town. Our town clerk, Mr. Deacon, has also (by my desire) addressed a letter to you on the same subject.

I have, &c.

Peter Dickson, Mayor.

Rev. *W. F. Hook* to *W. A. Mackinnon*, Esq. M. P.

Sir, Vicarage, Leeds, 19 April 1842.

IN replying to your letter, I may mention a remedy for the nuisance complained of, which has occurred to me, and upon which I had some intention of writing, last year, to the Bishop of London, when his lordship directed the attention of the House of Lords to some measures for the improvement of large towns. It appears to me that it would be easy to make it incumbent upon every town council to provide, out of the borough rate, a sufficient burial-ground, at a certain distance from the town, to be fixed by Act of Parliament; the ground to be divided into two parts, the one consecrated for church purposes, the other free to all classes of society.

To such an arrangement I do not think that any opposition would be raised, as all parties would be benefited.

Persons, not members of the church, would be gainers by the measure; because, whereas they are now compelled to inter according to the ceremonial of the church from which they dissent, they would, under the proposed arrangement, be left to the free use of their own ceremonies; and although the portion allotted to the church is large, they would consider this concession as due to the church, when the church recedes from an acknowledged legal right. I have conversed upon the subject with extreme Radicals and Chartists, and as I have not found them to object to such a plan, I conclude that no objection to it would be made by other parties.

But would there be any objection raised on the part of the church? I should hope and think not; certainly no objection would be raised by those who would postpone any civil rights of the establishment, to the spiritual advantages of the church, considered as a religious society; for, in this point of view, the church would be benefited. The clergyman is now compelled by law to inter every corpse brought to his churchyard, if the person died a parishioner; and he must inter according to the Office in our Prayer-book, however notorious the person may have been for immorality, or even for infidelity, if he were not legally excommunicated. This is felt by many of the clergy to be a great grievance. But under the proposed arrangement they will be relieved, and will be able to confine their offices to persons who died in the communion of the church. I feel sure that the majority of the clergy would be ready to make a great pecuniary sacrifice to be relieved from a duty which is the more unpleasant, since they are frequently exposed to insults in the discharge of it.

But then occurs the expense (which would be considerable to the poor) of conveying the dead to the proposed cemetery; but this difficulty would be overcome, if it should be made incumbent upon each town council to provide a public hearse, to be always in attendance at certain hours. The mourners would find means of conveying themselves. Each parish is at present obliged to provide a public bier.

Correspondence.

At the same time, we must consider and respect the very natural desire on the part of some persons to be interred in the same vault, or near the grave of their departed relatives. This sentiment is as strong among the poor as among the rich. It would be necessary, therefore, to permit interments in the old churchyards, under certain limitations. The degree of relationship might be fixed by law, and to prevent persons from acting merely from caprice, a double fee might be exacted. Such a plan as this was adopted some years ago at Coventry, when a new burial-ground was purchased, and it was determined to discourage interments in the old ground. The old churchyards would soon become ornamental to the towns.

On the third head of the Committee's inquiry, which relates to the vested rights of the clergy, I do not think the difficulty is so great as it may at first sight appear to be. At all events, if the temporal rights of the establishment interfere with the temporal welfare of the people, the former must yield to the latter. But we must bear in mind, that it is one of the misfortunes of the Church of England that her town parishes are generally the worst endowed, and that the clergy depend for a large portion of their income upon fees. I hope the time will come when pious individuals will purchase this right from the clergy, so that all the offices of the church may be performed gratuitously. In my own parish this has already been done, so far as Easter dues are concerned. A sum of money was subscribed and placed in the hands of trustees, who pay the interest to the vicar instead of Easter dues. And this might be done in the case of funerals. Every town council might be compelled, on purchasing a cemetery, to purchase also the rights of the incumbent, and then to appropriate the fees due upon the erection of headstones, &c. without demanding any for the interment. The incumbent would still be responsible for the performance of the duty in the consecrated ground. The sum required would not be large. In this parish the average number of funerals in the year is 15 hundred; and my fees, including headstones, &c., amount to less than 60 *l.* a year. As I have to provide a salary of 100 *l.* a year for a curate to do this duty, I should be a gainer by the proposed plan; but there are parishes in which these fees form the larger part of the income, and they could not be taken away without reducing the clergy to great distress. But as the fees are nearly the same in all places, you will perceive, from the statement I have made, that the sum required would not be great. Perhaps the fees might be purchased at two-thirds of their average value; I mention two-thirds, because the duties of the incumbent would be diminished, and he would gain by the certainty of his income.

The case of clerk and sexton would have to be considered in the next place; their incomes depend almost entirely upon fees; it would, therefore, be necessary to indemnify them, or to employ them in the churchyard with a fixed salary.

It would be important to prevent corporations from taking any fees, except for headstones, monuments, &c.

I have been induced, by the kind expressions of your letter, to offer these few suggestions. I am fully aware that there may be many objections urged against them; but I presume that you are desirous of receiving proposals, that you may adopt some measure, against which the fewest objections can be brought.

I have, &c.
W. F. Hook, Vicar.

William Brigg, Esq. to *W. A. Mackinnon*, Esq. M. P.

Sir, Bradford Court-house, 19 April 1842.

In answer to yours of the 7th instant, I have to inform you that Bradford alone consists of about 30,000 inhabitants; and including the borough, which is very close, will contain a population of 70,000; and the only place of public interment is the churchyard (92 yards by 71; this includes the church, steeple, and vestry, &c.) There are a great many places of dissent that have burial-grounds, but they are all private, and admit none but members of the sect, family, or some very particular favourite. I should recommend a public cemetery.

I am, &c.
Wm. Brigg, Mayor.

Mr. *John P. Brierly* to *W. A. Mackinnon*, Esq. M.P.

Sir, Oldham, 19 April 1842.

In reply to your letter respecting "Interments in Towns," I have to observe that we have in this township a parochial churchyard, which stands in an elevated situation, but on account of the great increase of the population in this borough (being 60,000 inhabitants, all of which can claim the right of burial there), there is not a grave to let; and the others being frequently opened, makes it unhealthy.

We have two district churches with yards, one of which is also full, and five small burial-grounds attached to dissenting chapels.

In the out-townships (although in the borough) there are three district churches, with burial-grounds connected with them.

I remain, &c.
John P. Brierly, Head Constable.

Thomas Stokes, Esq. to *W. A. Mackinnon*, Esq. M.P.

Sir, Leicester, 18 April 1842.

I RECEIVED your letter of the 7th instant on the 16th, in reference to interments within the precincts of towns, and shall be obliged if you will inform me when the information will be wanted. In my own opinion it is a matter of great importance; and if time be allowed, I will endeavour to interest the town council on the subject.

I am, &c.

Thomas Stokes, Mayor.

W. Morgan Meyler, Esq. to *W. A. Mackinnon*, Esq. M.P.

Sir, Gloucester, 18 April 1842.

I SHOULD suppose that the object of your communication, addressed to me by yourself as Chairman of the Committee for the Improvement of the Health of Towns, is in some measure to ascertain the state of the burial-grounds in this city, and the necessity that would here seem to exist as to public cemeteries outside the place.

Several of our churchyards have been latterly enlarged, or additional ground for burials procured, at a distance from the churches, but still within the respective parishes. These additions, however, have never been made until forced upon the parishioners by absolute necessity, from the overcrowded state of the ground. The churchyard of the parish of St. Michael, in the centre of the city, and closely surrounded on all sides by houses, was offensive in the extreme, before additional ground was procured about two years since. Few burials take place in the cathedral church of this city, from the exorbitant charges demanded by the chapter; but burials are still frequent in the parish churches. I am not aware, however, that in the city of Gloucester any contagious disease has been traced to the opening of graves; but as a medical man, I should not take upon myself to deny the probability of such events occurring; nor would observation allow me to hazard more than a conjecture that the occurrence of small-pox, measles, scarlatina, and other contagious disease, may and do sometimes arise in towns therefr m. But with these surmises only on my mind, unsupported by facts, I should still say, that where burial-grounds are sufficiently extensive for the use of parishes, there would be no necessity for the removal to cemeteries out of towns. The burial of bodies in churches, where congregations are frequently or daily assembled together, I should be glad to see discontinued (and I here speak the sentiments of many with whom I have spoken, as well as my own). The effluvia perceptible in many churches would alone be sufficient, in my mind, to call for such an enactment. May I venture to add, that a government tax of 10*l.* or 20*l.* in addition to the church fees, would soon remedy this evil, without absolutely interdicting it.

I am, &c.

W. Morgan Meyler, Surgeon.

Nathaniel Sharpe, Esq. to Mr. *Ridsdale* (for Mr. *Savery*).

Sir, Leeds, April 1842.

WITHOUT actually measuring the ground, but estimating the churchyards and sites of churches in Leeds from the map of the town, I consider the total quantity 11 A. 1 R. 39 P.

Nathaniel Sharpe, Surveyor.

Mr. Savery's compliments to Mr. Mackinnon with the above, showing the small extent of churchyards in the populous town of Leeds, where the average mortality must be many thousands per annum.

H. Hawkes, Esq. to *W. H. Mackinnon*, Esq. M.P.

Sir, Coventry, 15 April 1842.

IN answer to your favour of the 7th instant (only received yesterday), I beg to state for your information, that the population of Coventry is about 30,000 and the grave-yards very confined, and situate in the centre of the town. It has long been a subject of complaint that a greater space is not found for the purpose. Coventry is surrounded by lands called Lammas and Michaelmas lands, being open to the freemen and others to impasture their cattle from these periods to Candlemas, yearly. I would take the liberty to suggest that power should be given to take such lands or common lands for burying-ground, either with or without compensation, as may seem meet to the Committee.

Any further information you may require (if able) shall be happy to afford you.

I have, &c.

H. Hawkes, Mayor.

Mr. *James Leach* to *W. A. Mackinnon*, Esq. M.P.

Sir, Rochdale, 12 April 1842.

IN reply to your circular respecting interments within the precincts of towns, I may say that it is a subject which has often occurred to me as very well worthy serious attention. In Rochdale there are at least seven places of interment; viz. two, the parish church and St. Mary's; one, Lady Huntingdon's Chapel; one, Wesleyan Methodists; one, Baptist; one, Independents; one, Friends; two others belong to the Unitarians, which are very small. The parish churchyard has been long far too crowded. An additional yard, added some years ago, is now also full; and it has been under consideration how to provide for the reception of the dead in future. Fortunately the parish church is on high ground, at

Correspondence.

the extreme edge of the town, so that hitherto no harm has arisen; but now the town is spreading in that direction, and in a few years it is probable the now vacant land will be occupied with houses. The yard in St. Mary's is, I believe, crowded. The other places of interment are not so, but that of the Independents is more so than the others. A general cemetery would be an immense advantage to the public. I am not able to give any precise information beyond this at present; but if the Committee issue any circular of queries, I shall be glad to do all I can to procure proper replies to them, so far as this town will furnish them.

I am, &c.
James Leach, High Constable of Rochdale.

To the Worshipful the Mayor.

Dear Sir, Oxford, 12 April 1842.

My own inquiries, and those of other parties whose attention has been drawn to the necessity of a cemetery for this city, tend to prove that there are eight parishes whose respective burial-grounds are in an inconveniently crowded state, and that in some cases decency has been outraged by the revolting exposure of the remains of the dead ere yet the grave had fully done its task, as well as by the laying open to view the circumjacent coffins in digging fresh receptacles for the corpses of the parishioners.

Believing the subject to be one which the Oxford public desires to see regarded with serious attention,

I am, &c.
Thomas Randall, M.D.

A. J. Valpy, Esq. to *W. A. Mackinnon*, Esq. M.P.

Dear Sir, University Club, 13 April 1842.

I enclose a paper which will supply you with a sufficient answer to any objections relative to the expense of cemeteries. In truth, walking funerals will be superseded, by which some expense will be saved. I hope you will carry your Bill during this Session. Should you desire much information, I would recommend you to apply to B. Hawes, esq., 36, Brunswick-square (deputy chairman of the London Cemetery); also to W. Kingdom, esq., 41, Westbourne-terrace, Hyde Park. They are very conversant in all particulars, in which I should fail.

Believe me, &c.
A. J. Valpy.

Peter Dickson, Esq. to *W. A. Mackinnon*, Esq. M.P.

Sir, York Buildings, Southampton, 10 April 1842.

I have laid your letter before our town clerk (Mr. Deacon), who will report to you the present deplorable state of our principal burial-ground of St. Mary's, for all the united parishes in Southampton. An attempt has lately been made by the town council of Southampton to obtain a Bill in Parliament for powers to appropriate 22 acres of Southampton Common (of which the corporation are lords of the manor) for a cemetery, it being distinctly declared and understood that the corporation were to derive no profit whatever from the cemetery, and that all profits arising therefrom were to be bestowed for the benefit of the poor, in procuring for them as cheap a mode of burial as at the present time, when the sanctity of the grave is unavoidably invaded by the present crowded state of St. Mary's churchyard.

It was necessary to obtain the consent of the different vestries of the parishes in the town; and I regret to state, that the noisy declamations of the Radical faction prevailed, and the proposed Cemetery Bill was thrown overboard. The vestry meetings in this town have assumed such a character, that few gentlemen will be found to expose themselves to insult, and thus the decision of the vestries has become anything but the decision of the majority of the rate-payers of Southampton.

I am, &c.
Peter Dickson, Mayor.

Charles E. Deacon, Esq. to *W. A. Mackinnon*, Esq. M. P.

Sir, Southampton, 9 April 1842.

I am directed by the mayor of this borough to acknowledge the receipt of your letter to him, dated the 7th instant, and to inform you, in reply, that the town of Southampton much requires an additional burial-place, and that the want of it has long been felt a most serious evil.

The subject has, for several years past, engaged the attention of the council of the borough, as well as the inhabitants at large; but hitherto they have not succeeded in remedying the existing evil, although several attempts have been made to accomplish this most desirable object.

I beg to state, for the information of the Committee, that the population of Southampton is about 28,000, according to the last census, and that the only general burial-place for the whole town (and it has been so for centuries) is the churchyard of the parish of St. Mary, situate in a very densely populated part of the town. It consists of barely two acres of land, and the average yearly number of burials is about 400. The consequence is, that the churchyard is thickly crowded with the remains of the dead, and its state, and the daily necessity

necessity of finding space for burials, renders the frequent exposure and disturbance of corpses recently interred a most painful alternative, productive of danger to the health of those living in the neighbourhood, lacerating to the feelings of surviving friends, and distressing to the inhabitants in general.

The council being anxious that some effectual provision should be made for securing an additional burial-place without the precincts of the town, and remedying the existing nuisance, appointed a committee from their own body, to consider what steps should, under the circumstances, be taken, and the result was, that a portion of the Southampton Common, about 20 acres (and of which the corporation are the owners in fee) was selected for the purposes of a cemetery or burial-ground. This plan met the approval of the Earl of Guilford, the rector of the parish of St. Mary, as well as the majority of the clergy of the town; and all admitted the necessity of some measure being adopted. A petition for the establishment of the proposed cemetery, with a copy of the Bill, was presented to the House of Commons during the present Session, and all the requisite notices given in conformity with the Standing Orders of The House; but upon an appeal to the several vestries, (the inhabitant householders, being rate-payers, having rights of common over the land in question,) differences of opinion arose as to the spot, the mode, and the parties through whom this most desirable object should be carried into effect, and ultimately, in consequence of the subject of the interment of the dead within precincts of towns having been brought forward by yourself in Parliament, the council determined to abandon their plan for the present Session. In every parish the feeling was unanimous that the present burial-place had long been inadequate to the wants of the town, and, from its crowded state, was likely to prove highly injurious, and that another cemetery was indispensable to the health and morals of the inhabitants.

Should the Committee require any further information, or the attendance of myself, or any other party to give evidence before them, I am directed by the mayor to acquaint you, that every facility shall be afforded for that purpose; but at the same time to mention, that there is no fund in the borough out of which the expenses of parties attending to give evidence could be defrayed.

I have, &c.

Charles E. Deacon, Town Clerk.

John Innocent, Esq. to *W. A. Mackinnon*, Esq. M. P.

Sir, Sheffield, 31 March 1842.

Allow a stranger to thank you for your success in the House of Commons, so far as to obtain the appointment of a Committee to inquire into the state of interments in large towns, and I trust you will ultimately succeed in giving to the country such a Report as will convince all of the diabolical and unhealthful system of burial in the midst of large towns.

Having paid some attention to the subject, I shall be happy to render you any assistance that I can with regard to this town, by obtaining any information you may think will be useful.

I am, &c.

John Innocent, Bookseller.

—— *Revel* to *W. A. Mackinnon*, Esq. M. P.

Sir, 11, Grosvenor-street, 28 March 1842.

In reply to your note to Count Pollon, respecting the laws regulating, in Piedmont, the establishing of cemeteries, I am directed to apprize you that in his Sardinian Majesty's dominions the supreme court of law in each province, called the Senate, is invested with the uncontrolled power of granting or refusing the instituting new cemeteries, or regulating the conditions of their establishment. These courts always fix them at a distance from any town, village, or inhabited place. The cemeteries at Turin are at about one mile and a half or two miles from the town. Previous to granting a licence, the Senate deputes medical and other commissioners to inquire into the facts of the case, the spot intended for the new cemeteries, and decides upon their report.

I have, &c.

—— *Revel.*

His Grace the Archbishop of *Canterbury* to *W. A. Mackinnon*, Esq. M. P.

Dear Sir, Lambeth, 15 March 1842.

As I understand the Bishop of London is in communication with you on this matter, I will not trouble you with any remarks, as his Lordship's connexion with the metropolis makes him completely acquainted with the inconvenience of the present system, and the degree in which the removal of the grave-yards will affect the interests and rights of the clergy.

I remain, &c.

W. Cantuar.

Charles Savery, Esq. to *W. A. Mackinnon*, Esq. M. P.

Sir, King-square, Bristol, 18 March 1842.

Having for some time endeavoured to direct public attention to the disgraceful condition of city grave-yards, I have seen with much gratification your Parliamentary course upon this

Correspondence.

this subject; and presuming you will not object to receiving information from any one respecting it, I trouble you with this note; first, to state that in Bristol, with more than 100,000 population, the churchyards, including sites of churches, only amount to about 14 acres, used for centuries, and crammed disgracefully with bodies; and secondly, to suggest to you the utility of moving for, and obtaining, a Parliamentary return from every city and town of above (say) 10,000 inhabitants, of the extent of churchyards; the time they have been used; and, if practicable, the average mortality; although this may be generally assumed from the statistical knowledge of average deaths in our population.

Such a return would, I think, put forcibly in juxta-position the miserable condition of city grave-yards, and the number of corpses still added, corrupting in the midst of the living.

I am, &c.
Charles Savery.

Hugh Reveley, Esq. J. P. to *W. A. Mackinnon*, Esq. M. P.

Sir, Bryn-y-gevin, Dolgelley, N. Wales, 17 March 1842.

OBSERVING that you are bringing in a Bill for improving the health of towns, by removing burials from their precincts, I have taken the liberty of troubling you with a few lines on a subject which is more immediately affecting the public health; namely, the baneful practice of burial within the body of the church.

There is a custom, which occasionally prevails in this parish, of burying corpses within a small distance of the pavement; and never within my memory (upwards of 40 years) even in a leaden coffin.

Now, surely, this is a practice that I trust you will see the propriety of putting down, by a clause in your very laudable Bill, as it is certainly most disgusting to the feelings of the congregation; and there can be no valid reason why it should be tolerated; and in truth I have heard it frequently complained of.

I have, &c.
Hugh Reveley, J. P.

Charles Edward Blair, Esq. M. D. to *William Sparling*, Esq.

Sir, Colchester, 4 May 1842.

I AM directedby the Rev. Dr. Seaman to acknowledge the receipt of your communication of the 20th ult., and in reply, to say that the churchyard of this parish is in such a state as to render it exceedingly difficult to inter the dead. Large quantities of bones &c., are unavoidably disturbed on the occasion of every funeral.

I beg also to state as a medical man, that it is most desirable for the public health, that the dead should no longer be continued to be interred so immediately amongst the living.

I am &c.,
Charles Edward Blair, M. D.
Churchwarden of St. James.

W. Sparling, Esq. to *W. A. Mackinnon*, Esq. M. P.

Sir, Colchester, 25 May 1842.

THE mayor has caused inquiries to be made of the clergymen of the several parishes within this borough, but cannot ascertain that any inconvenience has arisen from want of sufficient room for interment except from the vicar of St. Peter's parish, which is very populous, and the parish of St. Runwald; those burying-grounds appear to be much crowded, and are considered by the incumbents of those respective parishes to be very unwholesome.

The parish of St. James, with a large population, is also similarly circumstanced. And as the report from that parish is signed by a physician, who is churchwarden, the mayor has requested me to inclose it for the information of the Committee.

I am, &c.
W. Sparling, Town Clerk.

Thomas Verner, Esq. to *W. A. Mackinnon*, Esq. M. P.

Sir, Belfast, 17 May 1842.

IN answer to your letter of the 7th ult., relating to the health of towns and the preventing of interments within their precincts, I beg to state that for some years past no interments have been permitted to take place in this town.

I would however observe that the burial-grounds in the neighbourhood are totally insufficient for the mortality that must necessarily occur in a town such as Belfast. Its population, which already is of no inconsiderable amount, continues greatly to increase its numbers each succeeding year, and it is with the greatest difficulty, that although several of them have been much encreased in size within a short space of time, the required accommodation can be found in any of the surrounding churchyards. That which is termed the new burial-ground, and is now bordering on the confines of the borough, will very shortly, from

from the great extension of the town in that direction, be brought within its limits, and already there is scarce a vacant spot for a grave to be found within its walls.

I should say there are few towns in Ireland so ill provided for in this respect as is Belfast.

I have, &c.
Thomas Verner, Sovereign.

H. C. Stenton, Esq. to *W. A. Mackinnon*, Esq. M. P.

Sir, Southwell, 10 March 1842.

In "The Times" of this morning I perceive you have introduced the alarming and revolting condition of our churchyards to the attention of the House of Commons.

I send you herewith a notice of a pamphlet I have published on the subject. If you cannot procure a copy, and will let me know that you wish to see it, I will send you one.

I trust, in your proposed alteration, whatever it may be, you will not restrict it to the metropolis. The condition of the churchyards in large towns is dreadful. Our churchyard in Nottingham is so very full, the authorities have, I hear, been compelled to close it for the present.

My attention was in the first instance attracted to the subject in a very painful manner. I went to St. Margaret's, Westminster, to look at the place where a relative had been buried a short time before. I found the grave violated, the tablet removed. I therefore determined to do all I could to remove the horrid and revolting practice now adopted.

Though a perfect stranger to you, Sir, may I ask the favour of your forwarding a copy of the Bill when it is printed?

I shall be most happy to give you any information, or assistance, I am able; and I most sincerely hope your endeavours to abate the nuisance may be crowned with success. My direction is "Henry Cawdron Stenton, solicitor, Southwell, Notts."

I am, &c.
H. C. Stenton.

Thomas Gutteridge, Esq. to *W. A. Mackinnon*, Esq. M. P.

Sir, Birmingham, 6 May 1842.

If your inquiries in other quarters have not already elicited all the information you desire, I shall be happy to furnish you with whatever it may be in my power to collect, particularly the extent of burying-ground in this town, the number of interments, the influence on public health by vapour or contamination of the water springs, and, by inference from these, the considerations to be borne in mind in choosing new places for depositing the dead.

I beg leave to suggest, as a subject well worthy of inquiry, the extent to which chemistry may be made available in retarding decomposition and diminishing the noxious effluvium and the defilement of the wells.

I have, &c.
Thomas Gutteridge.

J. Innocent, Esq. to *W. A. Mackinnon*, Esq. M. P.

Sir, Sheffield, 6 May 1842.

I have stated below the principal part of what I can state respecting Sheffield; and if you think it would be at all useful, it is of course at your service. It is not my wish to exaggerate, but you may rely on the statement. If you wish for the number of interments, or statistics of any kind, I will forward them.

It is my opinion that all grave-yards and burial-grounds in the midst of a large population ought to be closed, and I can assure you that in this town there is a very general feeling of the kind with respect to our parish churchyard; and one principal cause of interments being continued by the public, or rather I should say the poor people, is, they have not the means of purchasing new graves in the beautiful cemetery and out-churchyards, from the great depression in our trade at present.

I am, &c.
J. Innocent, Mayor.

That the parish churchyard, Sheffield, is in the centre of the town, surrounded by retail shops, offices, and respectable private dwellings; that graves are continually opened, from which offensive smells are emitted, especially in particular parts of the burial-ground; and at one corner resides a family who are so annoyed as to be under the necessity of keeping their windows constantly closed. I am myself often obliged to give orders for my windows to be shut when the grave-digger is at work, and the wind from the south. On the south side the land is very wet, and frequently buckets of black water of a most pernicious and unpleasant odour are emptied at or near to the principal street of the town. It is not unusual to see old coffins, in which bodies appear to be in a state of decomposition, taken out of graves, and secreted in what is termed the bone-hole, until a funeral has taken place, in order to make room for another interment, where scarcely it is possible to deposit another body, so crowded are many and most of the graves. I frequently see human skulls and bones strewn about the grave-yard in a most disgusting manner, and very often graves

Correspondence.

are opened only just deep enough to cover the coffins. I can only account for this, that either the parties were too poor to pay the full fee of interment or that the grave was full.

That St. Paul's churchyard is in a thickly populated part of the town of Sheffield, and the land there is also very wet, and when graves are opened much annoyance is experienced by the inhabitants. In the summer, after a heavy shower of rain, the nuisance of the drains into public street-channels is intolerable, so much so, that one of our most active and respectable magistrates has complained.

That St. George's churchyard is situated in one of the best parts of the town, but this grave-yard is a complete nuisance to the tenants of the respectable dwellings around it; and I have often heard one of our most respectable medical practitioners complain of having to pass this, as one of the greatest nuisances to the public health in the town of Sheffield.

C. Farran, M.D. to *W. A. Mackinnon*, Esq. M. P.

Sir, 44, York-street, Dublin, 30 April 1842.

I BEG to acknowledge the receipt, on the 21st instant, of your favour, dated the 7th, and shall as briefly as possible state to you the views I entertain on the subject of "interments within the precincts of towns." Without occupying your time by discussing the various grounds taken by different authors on the meaning of the words contagion and infection, it will be sufficient to state that the principle denoted by either of these terms is of such a very subtile nature that it has been found impossible to detect its presence in the atmosphere, even in those places well known to be generally fatal to any person who may be subjected to its influence.

The invasion of cholera, a disease highly aggravated by the neglect of those salutary precautions of ventilation, cleanliness, &c., and when neglect was superinduced by the dissemination of those dangerous doctrines. It was at this period that means of precaution were adopted to prevent its spreading; among others, that of interring the mass of victims in the burying-grounds outside the city, and these being speedily filled, were closed, and have so continued.

It has been vainly thought that when the body has been committed to the tomb all disease will moulder with it. We have many instances to prove the contrary to be the case: even when it has lain for years, and returned to its kindred dust, on being disturbed and exposed to the air, the disease springs up, renovated as it were by the rest it enjoyed in the grave, to recommence its havoc. We have the example which Eyam affords; in this place the plague broke out afresh from the inadvertent opening of a grave, after a repose of 91 years, and cut off to the extent of four-fifths of the inhabitants of a populous town. But I shall trespass on your time no further than by observing, that although, from the very subtile nature of miasm, it would be difficult to prove that a person received it at any one particular spot, still it would be presumptuous to deny its existence either in the abodes of wretchedness and want, or in the precincts of the grave; and on this ground I can have no hesitation in affirming as my conviction, that the atmosphere in the vicinity of our churches must be considerably vitiated by the constant turning up of decomposing animal matter, probably saturated with miasm, particularly when the grave-yards are walled in, and thus a free circulation of air prevented. I feel equally convinced that many disastrous terminations to life could be fairly attributed to the attendance on funerals in crowded churchyards. That this evil has greatly increased since population has made such rapid strides, is quite evident, and in my mind calls loudly for the intervention of the Legislature to put an end to such a pernicious practice as the interment of bodies within the precincts of towns. Wishing you every success in your philanthropic exertions,

I remain, &c.
C. Farran, M. D.

G. A. Walker, Esq. to *W. A. Mackinnon*, Esq. M. P.

Sir, 3 May 1842.

ALTHOUGH I feel convinced that I have established by abundant evidence every allegation contained in my petition, and am sensible that the investigation has been carried on with the strictest impartiality and most unwearied patience, I am yet anxious to draw your attention, and that of the other gentlemen forming the Committee, to some very interesting facts connected with the inquiry, which seem too important to be omitted; and to a few practical observations upon the evidence adduced.

Mr. Jones, undertaker, residing in Devereux-court, Essex-street, Strand, placed a body in a leaden coffin and the other usual cases, and deposited it in the catacombs of Kensall Green cemetery. It had remained there about three months, when he was informed by the secretary of the cemetery company that "the coffin leaked, and that he must see to it immediately." Mr. Jones, accompanied by his assistants, went to the cemetery, removed the body from the horizontal stone resting-place, which was sealed very carefully at the ends and round the sides. It was necessary to remove the lid of the outer coffin and turn out the body, enclosed, as is usual, in the shell and leaden coffin; these were reversed, when it was found that a small hole existed at the under part of the leaden coffin. This hole was enlarged with a gimblet by one of the assistants, Mr. Thomas Moxley; the gas which escaped extinguished a lighted candle three distinct times, and he was rendered incapable of following his occupation for several weeks.

Mr.

Mr. William Morgan, undertaker, 30, Russell-court, Drury-lane, was employed in making room in a brick vault, in the churchyard of ——, for the reception of the remains of Admiral ——. He was compelled to arrange several bodies, which had been deposited in lead, in this vault. During the operation he was obliged to stand upon the top of some coffins; these gave way, and the gas produced by the decomposition of the bodies enclosed within them escaped. He was instantly sensible of a coppery taste in his mouth, with dryness and huskiness of the throat. He had confusion of intellect, extreme pain in the head, giddiness, trembling, particularly of the lower extremities, and immediate sickness upon the first inspiration of the gas. His three assistants, who were nearer the mouth of the tomb, were affected in a similar manner, but in a less degree. Every man within the reach of the malaria was instantly seized with vomiting. They escaped as quickly as possible from the vault into the open air, supporting each other by the arms. Mr. Morgan was conveyed home, took to his bed, had what his medical man, Dr. Davis, termed "a malignant typhus fever," and was 13 weeks unable to follow his employment. He was previously to this exposure to the exhalations of the dead in excellent health, but is now, at the expiration of 12 years, and at the age of 45, completely shattered in constitution.

My pupil, Mr. J. H. Sutton, accompanied by an individual for many years occasionally employed in the office of burying the dead, entered the vaults of St. —— Church, and a coffin "cruelly bloated," as one of the grave-diggers expressed it, was chosen for the purpose of obtaining a portion of its gaseous contents. The body, placed upon the top of an immense number of others, had, by the date of the inscription on the plate, been buried upwards of eight years. The instant the small instrument employed had entered the coffin, a most horribly offensive gas issued forth in large quantities. Mr. S., who unfortunately respired a portion of this vapour, would have fallen but for the support afforded by a pillar in the vault. He was instantly seized with a suffocating difficulty of breathing (as though he had respired an atmosphere impregnated with sulphur); he had giddiness, extreme trembling, and prostration of strength. In attempting to leave the vault he fell from debility; upon reaching the external air, he had nausea, subsequently vomiting, accompanied with frequent flatulent eructations, highly fetid, and having the same character as the gas inspired. He reached home with difficulty, and was confined to his bed during seven days. The pulse, which was scarcely to be recognized at the wrist, although the heart beat so tumultuously that its palpitations might be observed beneath the covering of the bed clothes, ranged between 110 and 125 per minute, during the first three days; for many days after this exposure his gait was very vacillating.

The man who accompanied Mr. Sutton was affected in a precisely similar way, and was incapacitated from work for some days. His symptoms were less in degree; prostration of strength, pains in the head, giddiness, and general involuntary action of the muscles, particularly of the upper limbs, continued for several days afterwards. These symptoms had been experienced, more or less, by this person on many previous occasions, but never to so great a degree. I have myself suffered from the same cause, and been compelled to keep my room upwards of a week.

Mr. Mason, a patient of mine, some years since, was exposed to a similar influence. A stout, muscular man died in his house, in the month of June, after a short illness; on bringing the body down stairs Mr. Mason was instantly affected with giddiness, prostration of strength, and extreme lassitude. He had a peculiar metallic taste in the mouth, which continued some days. He believes that his health has been deranged from this cause.

A grave-digger was employed to obtain a portion of gas from a body interred in lead, in the vaults of St. ——. The man operated incautiously; he was struck to the earth, and found lying upon his back; he was recovered with considerable difficulty.

On the 10th of June 1839, I called to attend a widow named Adams, housekeeper to a gentleman residing in Gray's-Inn-square. Some days before my arrival she had been attacked with pain, which she referred to the region of the liver. The pulse, on my first visit, was weak and easily compressible, ranging between 120 and 130. She complained of no pain; her heart beat tumultuously; the tongue was brown and dry, and protruded with difficulty; her general symptoms were those of action without power. I carefully watched the case, but notwithstanding all my efforts, my patient sunk on the 22d of the same month. She had been a regular attendant at Enon Chapel. She died of typhus, accompanied with symptoms of extreme putrescency. Can the cause be problematical?

Four bodies had been placed in a tomb in the Eastern Cemetery, into which it was found water had penetrated; the first body had been interred in February 1836, the last in April 1839. Two grave-diggers, employed in the removal of the water and the dead bodies, were from the commencement of their labour struck with the fetid odour given off, yet they continued their work They had removed a large quantity of water and two coffins, when in attempting to seize the third their feet slipped, and the water remaining in the tomb was violently agitated by their fall; one of the men fell instantly lifeless; his comrade made several efforts to raise him; at the third attempt he fell, deprived of consciousness, upon the body of his unfortunate companion; assistance being quickly rendered, the men were withdrawn from the tomb. The grave-digger who first fell was dead, the other, notwithstanding the extreme attentions of two medical men, remained unconscious during six hours; for a space of a month afterwards he suffered greatly from difficulty of breathing and weakness of the legs, which in the course of the same month were affected with a general desquamation.—*Annales d'Hygiène.*

In the month of August, in the year 1835, a vault was opened in the aisle of the church in Little Berkhampstead, Herts; the body of a child had been placed in this vault about

Correspondence.

15 months previously; upon removing the stone a peculiarly offensive smell was emitted; the vault was found nearly full of water, in which the coffin was floating. My informant, the then sexton, Benjamin Smith, now living No. 8, Princes-street, Drury-lane, was instantly affected with nausea, followed with diarrhœa, extensive trembling, prostration of strength, and loss of appetite, and these symptoms continued some weeks. He believes that his health has seriously suffered in consequence. The bricklayer and labourer employed in opening the vault and taking out the water were also affected; and Mrs. Smith, whilst cleaning the inside of the church, several days afterwards, was sensible of a very offensive odour, which was perceptible during Divine service on the Sunday following.

William Jackson, aged 29, a strong robust man, was employed in digging a grave in the Savoy; he struck his spade into a coffin, from which an extremely offensive odour arose; he reached his home, in Clement's-lane, with difficulty, complained to his wife that he had had a turn; the stream which issued from the coffin had made him very ill; he had pain in the head, heaviness, extreme debility, lachrymation, violent palpitation of the heart, universal trembling, with vomiting. His wife stated that the cadaverous smell proceeding from his clothes affected her with trembling, and produced headache; she mentioned that she had been before affected in a similar way, although more slightly, from the same cause. Jackson recovered in a few days, although considerably debilitated. Compelled by the poverty of his circumstances he attempted, seven days afterwards, to dig a grave in Russell-court, Drury-lane. In this ground, long saturated with dead, it was impossible, without disturbing previous occupants, to select a grave; a recently-buried coffin was struck into; the poor fellow was instantly rendered powerless, and dragged out of the grave by John Gray, to whom he was an assistant. Jackson died thirty-six hours afterwards. This case occurred during the visitation of the spasmodic cholera, and his death was attributed to that cause.

Mr. Paul Graham, residing in my immediate neighbourhood, had buried a child in Russell-court, Drury-lane. An acquaintance of his was buried in the same ground a few weeks subsequently, and as the survivors had a suspicion that his body had been exhumed, an undertaker was employed to ascertain the fact. Mr. G., accompanied by another person, was present during the time the lid of the coffin was partially removed; a most offensive effluvium was emitted; he was affected with instant vomiting, headache, confusion of intellect, prostration of strength, and trembling; the other person became unwell from the same cause; the undertaker had carefully averted his head during the partial removal of the lid of the coffin, and thus escaped its effects. Mr. G. stated to me, that no sensation of disgust could have occasioned these symptoms, as the body was not exposed. He has, to this day, a vivid recollection of the offensive odour.

A grave-digger was employed, a short time ago, in the ground of St. Clement Danes, Strand. He had excavated a family grave to the depth of 16 feet, and when the coffin was to have been lowered, he went down by the boards on the sides to the bottom of the grave, and had what is called a turn: he felt as if he had his mouth over brimstone (the taste was sulphury); he called out but was not heard; he then motioned with his hands, and a rope was lowered down; he seized hold of the rope, and was pulled up to the surface; he was "queer for a day or two."

Mr. Tumbleton, a highly respectable undertaker, of No. 4, Warwick-street, Golden-square, informed me that about 11 years ago, he attended the funeral of an Odd Fellow, on a Sunday, at Enon Chapel, Clement's-lane, Strand; he smelled a disgusting stench; he was seized, within 40 hours, with a violent pain in the back of the left hand, continuing about an hour; had cold chills within half an hour afterwards, took a glass of rum-and-water, and went to bed; he arose in the morning very ill, and consulted Dr. Burnett of Golden-square, who ordered him home, and told him that he would give him three weeks before he got up again. This prognostic was true to a certain extent, for the patient kept his bed nine weeks, with a malignant typhus and all its concomitant evils.

The following important fact was communicated to me by one of the parties immediately concerned:

A lady died on September 7th, 1832, and was buried in the rector's vault, in St. —— Church, on the 14th. The undertaker had occasion to go down into the vault, near the communion table; he had done the work of the church nearly 30 years, and was well acquainted with the localities; the grave-digger had neglected to take up the slab which covered the vault; the undertaker being pressed for time, with the assistance of the son of the deceased, removed the stone. The two descended, taking with them a light, which was almost instantly extinguished upon reaching the lower step of the vault; both were simultaneously seized with sickness, giddiness, trembling, and confusion of intellect; the undertaker raised his friend, who had fallen on the floor, and with difficulty dragged him out of the vault; he himself, although a man previously in excellent health, was seized with vomiting the next day, and for 12 months rejected his food; at the end of this period, after having been under the care of many medical men, he consulted Dr. James Johnson, from whom he derived great benefit; the doctor pronounced his case to be one of poisoning from mephitic gases. The patient is convinced that his health has been completely ruined from this cause; he is now obliged, after a lapse of seven years, to live entirely by rule. The young gentleman who was with him was subsequently under the care of many medical men upwards of two years; his principal symptoms, those of a slow poison, developed themselves gradually, but surely: he was attacked with obstinate ulcerations of the throat, which were not removed until more than two years had elapsed, although he had frequent change of air, and the best medical assistance that could be obtained.

In

Correspondence.

In the month of June, in the year 1835, a woman died of typhus fever, in the upper part of the house No. 17, White-Horse Yard, Drury-lane. The body, which was buried on the fourth day, was brought down a narrow staircase. Lewis Swalthey, shoemaker, then living with his family on the second floor of this house, and now residing at No. 5, Princes-street, Drury-lane, during the time the coffin was placed for a few minutes, in a transverse position, in the doorway of his room, in order that it might pass the more easily into the street, was sensible of a most disgusting odour which escaped from the coffin. He complained, almost immediately afterwards, of a peculiar coppery taste, which he described as being situated at the base of the tongue and posterior part of the throat; in a few hours afterwards he had, at irregular intervals, slight sensations of chilliness, which, before the next sunset, had merged into repeated shiverings of considerable intensity. That evening he was confined to his bed; he passed through a most severe form of typhus fever; at the expiration of the third week he was removed to the fever hospital, and recovered. He had been in excellent health up to the instant when he was exposed to this malaria.

During the demolition of the old church of St. Dunstan's, the dead in the vaults were removed. This was found to be a matter of some difficulty and much danger. Several of the labourers employed refused to continue the work; they were well supplied with brandy, and under the influence of a half-drunken excitement they effected their removal. William Mutton, a labourer employed, within a few hours after his exposure, complained of a nauseous taste in the mouth and throat, severe pain in the chest, accompanied with a cough; his skin subsequently became of a deep yellow tinge, and extremely harsh and dry. This man was at times so affected with the effluvia, that he was compelled to support himself against the wall of the vault. In removing the body of a man who had committed suicide, the gaseous exhalation was so powerful, that he was rendered unconscious for a considerable period. He invariably declared that this was the cause of his death.

Thomas Beale, 2, Cromwell-place, Little Shire-lane, a strong compactly-made man, aged 26, has been employed as grave-digger about four years. He was engaged, in the month of January 1840, in assisting William West, the beadle of St. Mary-le-Strand, to clean up the rector's vault, previous to the reception of the body of a deceased parishioner, who died 27th January 1840. The vault, a detached building, is entered by steps from the churchyard. Two of the men employed were sensible of a disgusting odour, which left a coppery taste in the throat. On the evening of the same day Beale had vomiting, cough, and considerable expectoration, and extreme lassitude during five or six days. Six days after this exposure he consulted me, in consequence of a peculiar eruption, which first attacked the breast, and subsequently (within two days) spread over the entire surface of the body. On the 14th day from the appearance of this eruption, a very painful enlargement of the glands in the left axilla, and the groin of the same side, occurred, both of which suppurated extensively during six weeks. He has now, May 5th, 1840, the remains of the eruption over large portions of both arms. I produce this case to show an example of the same poison producing the same results, for William West, who died of typhoid fever, was affected in precisely the same manner, excepting that he had no glandular enlargement. He imprudently entered the vault soon after it was opened for the purposes of ventilation. After his return home he complained to his wife that he had a peculiar, a coppery taste in his mouth. Within a few hours afterwards he complained of pain in the head, nausea, loss of appetite, and debility. In a few days he was attacked by an eruption, which first appeared over the chest, and in a few days had covered the entire body. He remained a considerable time in a very debilitated state; and it was the opinion of his widow that it was in consequence of his imprudent exposure to the exhalations passing off from the bodies in this vault.

The above facts fully demonstrate the insecurity and danger arising from inhumation, even in coffins lined with lead, and deposited in vaults.

The following observations are respectfully submitted as corroborative of the evidence furnished to the Committee during the investigation.

The gases given off during putrefaction distend the leaden coffins to such a degree that to prevent their bursting, it is necessary frequently to bore a hole in them, to allow the gases to escape. Sometimes the gas is burnt, and the combustion continues from 15 to 20 minutes, with a faint blue flame.

That carbonic acid is generated is rendered extremely probable by the fact that it instantly extinguishes light; that it falls to the bottom of the grave when dug; and that the grave-diggers are in the habit (as stated by the sexton at Aldgate) of letting down empty buckets into the grave, and thus drawing up the gas, which they state they pour out like water on the surface.

All the sudden deaths which have taken place appear to have been by asphyxia. When the gas does not immediately destroy life it produces first an alarming sense of depression, and loss of muscular power, to this succeeds a state of slight reaction; the first shock so paralyses the bodily powers, and deteriorates the circulating fluid, that neither are equal, the one to bear or the other to keep up the increased stimulation induced by the reaction of the system. This second stage corresponds to the febrile stage of typhus fever, which it closely resembles, and is attended by vomiting and purging, with sometimes flatulent eructations of a highly fetid character. Then comes the stage of exhaustion, which depends on the quantity and recency of the gas respired, and the powers of resistance of the person attacked. In a recent case the symptoms amounted merely to debility, loss of appetite,

Correspondence.

and supposed engorgement, with torpid action of the liver, conjoined with sickness, oppression of breathing, and a coppery disagreeable taste in the mouth, which continued some days.

In the cases mentioned in Cyclop. Pract. Medicine, p. 356, two men were instantly attacked from the effluvium of a grave, and died within a few days. The symptoms were those of plague, which Dr. Armstrong says is the typhus of this country; and indeed the analogy between the diseases of this class is so great that it is not unreasonable to suppose a similar cause for all, allowance being made for climate, habits of living, &c., which will often occasion some remarkable dissimilarity in diseases apparently the same.

Indisputable facts prove, that gaseous exhalations from dead bodies have in many instances seriously injured health, and in others immediately destroyed life. In warmer climates than our own many instances have occurred; in London within the last four years five lives have been openly sacrificed.

The more deeply a body is placed in the earth the more slowly will putrefaction proceed; yet layers of earth of several feet in depth can no more intercept the transmission of gas into the atmosphere than they can by their density prevent the infiltration of water; the one ascends, the other descends, through a permeable medium. Gases, indeed, are evolved with such force, and in such quantity from bodies placed in leaden coffins in vaults (under a medium temperature), that the lids of such coffins, notwithstanding the atmospheric pressure become convex, and sometimes are rent asunder, and the gases thus and otherwise evolved become diffused and mixed with the atmosphere, and enter the lungs in every inspiration.

A grave-yard presents an excellent absorbing surface, its dark colour and its loose texture affording the conditions most favourable for this process; hence during the day the superficial stratum of earth freely absorbing the heat emitted from the sun, will have its temperature thereby raised considerably above that of the superincumbent atmosphere. Now as heat is freely communicated from one body to another in contact with it (by conduction), until an equilibrium of temperature be established, the layer or stratum of atmospheric air lying immediately above or upon the surface of the earth, receives from the latter portions of the solar heat which it had previously absorbed, and being thus rendered specifically lighter, rises (as a balloon containing air rarefied by heat) to the higher regions of the atmosphere; its place being immediately occupied by another portion of cold air, which, in like manner, becomes heated and ascends, thus establishing a continual upward current.

The effects of such currents, most powerfully assisted by the atmospheric pressure of 2,160 lbs. upon every square foot of surface, and thus aided by heat and moisture, the absolute essentials in the putrefactive process, amalgamating the more solid compounds with the soil, and dissipating the gaseous products through the atmosphere, cannot be misunderstood, and ought to be fully appreciated; for it is difficult, if not impossible, to calculate the distance to which such emanations may extend: and on the dilution, quality, quantity, and, I believe, the age of the gas and the power of resistance of the individuals exposed to its influence, will depend the risk to the persons who inhale it.

During night the earth no longer receives heat from the sun, and since the conditions most favourable for absorption of heat are likewise those which confer the greatest radiating power, the heat previously absorbed is soon lost by radiation; the upward current ceases; gases eliminated from the grave-yards, vaults, &c. distributed in patches in the midst of human dwellings all over London, obey the impulse of gravity, that is, if lighter than the atmosphere, they ascend; if heavier, they remain diffused through its lower strata, and inflict especial injury upon the inhabitants living in houses in the immediate neighbourhood of grave-yards, more especially where sunk areas, as in my neighbourhood, abut upon the burial-places.

In certain states of the atmosphere, and early in the morning, the condensed gases given off from the grave-yards in my locality have been seen, and the peculiar putrefactive odour of the dead, easily recognizable. I have frequently reflected with mingled feelings of disgust and pity, upon the miserable, cautious, trimming policy of individuals, who, although ignorant and uninstructed in a matter of such vital import, yet refuse to be enlightened. We have a society for the prevention of cruelty to animals, societies for almost every other object than the protection of the health of the animal man. Yet it is not only cruel, but highly impolitic, to expose masses of human beings to influences that must injure their health, deteriorate their powers for industrious purposes, render them dependent upon their friends or the parish for pecuniary or other assistance, and thus—in consequence of primary neglect—the most unjustifiable experiments are made upon tissues or organs which may never recover their original tone or function.

The experience of the wisest men of all ages has gone far to prove that the mental and moral qualities of a people materially depend on their physical organization; that causes injuriously affecting the latter, must surely and inevitably blunt the susceptibility, and impair the energies of the former; and since the physical being can be modified and altered by varying the external influences acting on the population, the importance, nay, imperative necessity, of due sanatory regulations for the conservation of the public health must be a paramount and primary consideration in the projection of any scheme of social improvement.

It is my settled conviction that the subject of the burial of the dead, to which the Members of the Committee have paid such marked and close attention, is one great, if not the greatest, source of disease and death in crowded communities. Grave after grave is dug in soil frequently so overcharged with putrescent animal matter, that it is impossible to prevent

vent the corruption of the atmosphere from the exhalations unavoidably arising (more especially during the warm season) from the frequent upturning of the earth.

In many instances bodies are placed one above another, and side by side, until the accumulated masses of corruption have reached a depth of 25 or 30 feet, the topmost coffin being but a few inches from the surface. The condition of the majority of the grave-yards and burying-places in London has been such for many years, that they have not been capable of receiving the annual mortality. There is scarcely a single grave-yard, vault, or receptacle for the dead in London that is not overcharged. The burial-places of the metropolis and of the provinces have been under no superintendence; public bodies or private individuals have been at liberty to allot grounds or to choose depositories for the reception of the dead, withour limitation as to number, without control as to locality or the disposal of the charge with which they were intrusted, and it is proved that individuals have availed themselves to an alarming and most injurious extent of the ignorance or poverty of survivors.

In certain localities, the most shameful practices are pursued by individuals, who (in the absence of peremptory legal enactments to the contrary) mutilate and displace bodies in various stages of decomposition, to the certain deterioration and destruction of the health of the living, and it is worthy, Sir, the serious attention of your Committee that these acts are perpetrated in burying-places in densely populated districts; neighbourhoods, indeed, in which the filthy, ill-ventilated condition of the streets and houses is such, that any additional causes of the corruption of the atmosphere should not be permitted to exist.

I have, &c.

Geo. Alfred Walker.

Wm. Prout to *W. A. Mackinnon*, Esq. M.P.

Sir, Sackville-street, 25th May 1842.

THE subject of putrid exhalations from churchyards has not particularly occupied my attention; but there can be no doubt that the effects of such exhalations on the health of individuals exposed to them, particularly in crowded localities, is most pernicious. I have no hesitation, therefore, in expressing my decided opinion, that the interment of the dead among the living should be no longer permitted; and that public cemeteries should be established in such situations, and at such distances from large towns, as to prevent the possibility of their becoming, at any future time, surrounded by dwellings.

I have, &c.

Wm. Prout.

To the Committee of the House of Commons, on the Interment of Bodies.

THE Society of Friends has always been very careful respecting the mode of interment in its burial-grounds. It possesses very sufficient accommodation; and on religious grounds, as well as a due regard to the comfort of relations and friends attending funerals, and that distinctness which has been freely accorded to its peculiar usage on such occasions, it desires to be excepted in any recommendation which the Committee on the "interment of bodies" may think necessary in furtherance of a more suitable public provision than at present exists. The Society, therefore, desires the opportunity of furnishing evidence on the state of its burial-grounds, in such places as may be selected for primary attention.

The Society's burial-grounds in the metropolis are all of them in districts which were suburban when they were first used. They are of that size and extent which leave a space for the beneficial circulation of air in the surrounding locality. In comparison with other burial-grounds, the interments are unfrequent, and are of an average clear depth of seven or eight feet from the coffin, which amply secures the public safety. Except the expense of digging the grave, no charge is permitted throughout the Society, consequently the inducement of pecuniary advantage for the use of the ground is unknown; but the Society is constantly liable to expense in its strict care of the walls, and in the oversight which is necessary for the neatness, decency, and order of the premises respectively.

With respect to other large places, it may be stated briefly, that at Bristol the Society has three burial-grounds; in Leeds one, recently much enlarged, at considerable expense; and in other large places adequate provision.

In any place or district to which the Committee of the House of Commons may desire to call attention, or concerning which the necessity with regard to the public safety can be demonstrated to be urgent and imperative, the Society cordially invites inquiry and the inspection of its burial-grounds, while it offers no opposition to what may be demanded by the necessity of the case; although it can but deprecate any expedient which, in its operation, interferes with religious liberty, or induces a valid objection on conscientious grounds.

Correspondence.

STATEMENT relating to INTERMENTS in the Metropolitan Burial Grounds of the SOCIETY of FRIENDS.

—	Average Annual Number.	Capacity of the Ground for Graves.	Time required to fill.
			Years.
Bunhill-Fields	26½	3,429	129
Whitechapel	9	1,993	221
Ratcliff	3½	364	104
Long-Lane, Bermondsey	17½	718	41
Stoke-Newington	5	520	104

The capacity for the numbers above stated is on a computation of 18 square feet for each individual, including children, in the average. At Peckham, Croydon, Tottenham, and Winchmore-hill, there are also smaller burial-grounds, convenient as well for the Society in the metropolis as for those portions of it that are resident near those places.

The Society has also purchased several decayed houses near its ground at Bunhill-fields, with a view to improvement of the premises; but is discouraged near its proceeding: the houses were occupied by a very low class of persons.

Jacob Hagen, East Dulwich, Surrey.
Thomas Norton, Peckham Rye.
Sam. Cash, Peckham.
William Cash, Peckham Rye.

INDEX.

ANALYSIS OF INDEX.

ALPHABETICAL and CLASSIFIED LIST of the PRINCIPAL HEADINGS contained in the following INDEX, with the Pages of the Index at which they will be respectively found.

Page of Index.

ALDGATE Churchyard - - - - 218
Andrew, St. (Holborn) - - - - 218
ANDREW, ST., UNDERSHAFT (St. Mary Axe) 218
Depth of Graves, 2 - - - - 228
Destruction of Coffins - - - 228
Effluvia, II. 2 - - - - - 230
Health of Large Towns, II. 5 - - 238
BONES - - - - - - - - 219
Destruction of Coffins - - - 228
Skittles - - - - - - 252
Spa-fields Burial-ground - - - 252
Stepney - - - - - - 253
Botolph, St. (Bishopsgate) - - - 220
BURIAL FEES:
1. *Generally* - - - - 221
2. *At particular Churches and Burial-grounds* - - - 221
Andrew's, St. (Holborn) - - - 218
Fraudulent Burials (Bishopsgate) - 233
George's, St. (Bloomsbury) - - 234
George's, St. (Hanover-square) - - 234
Parish Clerks - - - - - - 248
Sextons - - - - - - - 252
West London and Westminster Cemetery 257
Whitechapel - - - - - - 257
Butler's Burial-ground (St. John's, Southwark) 221
Cambridge - - - - - - - 221
CEMETERIES:
1. *Generally* - - - - 222
2. *How far conducive to the Health of Large Towns* - - - 223
3. *Expense of them, especially with respect to the Burial of the Lower Classes* - - - 223
4. *Distance at which they should be situated from Towns* - - 223
5. *Evidence respecting Cemeteries in Foreign Countries* - - 223
Burial Fees - - - - - 221
Clergy, 1, 2, 3 - - - - - 225
Dissenters - - - - - 229
Dunstan's, St. (Stepney) - - - 230
Frankfort - - - - - 233
Highgate Cemetery - - - - 239
Kensal-green Cemetery - - - 240
Leonard's, St. (Bromley) - - - 242
Paris - - - - - - - 247
Spain - - - - - - - 253
Stepney - - - - - - - 253
Victoria Park - - - - - 255
Church Building Commissioners - - - 224
Churches - - - - - - - 224
Churchyards - - - - - - 224
CLEMENT'S LANE BURIAL-GROUND - - 225
Depth of Graves - - - - 228
Destruction of Coffins - - - 228
Effluvia, II. 1 - - - - - 231
Health of Large Towns, II. 1 - - 237
Insects - - - - - - - 239
Mortality - - - - - - 246

Page of Index.

CLERGY:
1. *Whether the Management and Superintendence of Cemeteries should be vested in them* - 225
2. *Compensation which should be made to them in the Event of a Legislative Enactment for Interment out of Towns* - 225
3. *Their willingness to make some Sacrifice for the sake of an Improvement* - - - - 225
Burial Fees - - - - - 221
Cemeteries - - - - - 222
Complimentary Fees - - - - 226
Highgate Cemetery - - - - 239
Kensal-green Cemetery - - - 240
Leeds - - - - - - - 242
Monuments - - - - - 246
Prohibition of Interments in Town - 248
CONVEYANCE OF FUNERALS - - - 227
Cemeteries - - - - - 222
Shillibeer, Mr. - - - - - 252
DEAD BODIES - - - - - - 227
Medical Police - - - - - 245
Stepney - - - - - - 253
Wakes - - - - - - 255
DECOMPOSITION OF BODIES - - - 227
Depth of Graves, 1 - - - - 228
Quick Lime, 1 - - - - - 249
DEPTH OF GRAVES:
1. *Generally* - - - - 228
2. *In particular Churchyards and Burial-grounds* - - - 228
Destruction of Coffins - - - - 228
Dissenters - - - - - - 229
Dunstan's, St. (Stepney) - - - 230
EFFLUVIA:
I. *Generally* - - - - 230
II. *Whether injurious to Health:*
1. *Generally* - - - 230
2. *In particular Localities* - 230
Exhalations - - - - - 231
Fevers - - - - - - 232
Health of Large Towns, I. - - - 237
Leaden Coffins - - - - - 241
Mary's, St. (Birmingham) - - - 245
Quick Lime, 1 - - - - - 249
ENON CHAPEL (Clement's Lane) - - 231
Burial Fees - - - - - 221
Destruction of Coffins - - - 228
Effluvia, II. 2 - - - - - 231
Gases, 2 - - - - - - 234
Health of Large Towns, II. 2 - - 237
Insects - - - - - - - 239
Mortality - - - - - - 246
Quick Lime - - - - - 249
Sewers - - - - - - 252
Vaults - - - - - - 255

ALPHABETICAL LIST of the PRINCIPAL HEADINGS—*continued.*

Page of Index.

EXHALATIONS - 231
Effluvia - 230
Gases - 234
Health of Large Towns - 237
Typhoid Fever - 254

EXPENSES OF BURIALS - 232
Cemeteries, 2, 3 - 222

FEES - 232
Burial Fees - 221
Clergy, 2 - 225
Complimentary Fees - 226
Highgate Cemetery - 239
Tower Hamlets Cemetery - 254

FEVERS - 232
Elim Chapel - 231
Leeds - 242
Typhoid Fever - 254

GASES:
1. *Their Escape from Graves, and injurious Effects generally* - 234
2. *In particular Churchyards and Burial-grounds* - 234
Aldgate Churchyard - 218
Effluvia - 230
Exhalations - 231
Fevers - 232
Leaden Coffins - 241
Strand, The - 253
Water - 256

George's, St. (Southwark) - 234

GILES, ST., IN-THE-FIELDS - 235
Burial Fees - 221
Cemeteries, 4 - 222
Decomposition of Bodies - 227
Depth of Graves, 2 - 228
Vaults - 255

GLOBE FIELDS BURIAL-GROUND (Mile End) 235
Destruction of Coffins - 228
Effluvia, II. 2 - 231

GRAVEDIGGERS:
1. *Generally* - 235
2. *Effect of their Employment upon their Health* - 235
3. *Their addiction to Spirits* - 236

HEALTH OF LARGE TOWNS:
I. *Generally* - 237
II. *In the neighbourhood of Particular Churchyards and Burial-grounds* 237
1. *Clement's Lane Burial-ground* 237
2. *Enon Chapel* - 238
3. *Martin's Burial-ground* (New Bunhill Fields) - 238
4. *Portugal-street Burial-ground* 238
5. *St. Andrew Undershaft* (St. Mary-Axe) - 238
6. *Southampton* - 238
7. *Spa Fields* - 238

Highgate Cemetery - 239
Hoole & Martin, Messrs. - 239
Insects - 239
Kensal-green Cemetery - 240
King's College Hospital - 240

LEADEN COFFINS:
1. *At St. George's* (Southwark) 241
2. *At St. Giles-in-the-Fields* - 241
3. *Whether they are a Protection against the Escape of Noxious Gases* - 241
Gases - 234

Page of Index.

Leeds - 242

LEONARD, ST., SHOREDITCH - 242
Depth of Graves, 2 - 228
Disinterment of Bodies - 229
Lock Burial-ground (Dover Road) - 242
Margaret, St. (Westminster) - 244

MARTIN'S BURIAL GROUND (Borough) - 244
Depth of Graves, 2 - 228
Effluvia, II. 2 - 231
Gases, 2 - 234
Health of large Towns, II. 3 - 238

MARTIN'S, ST. (Ludgate Hill) - 244
Effluvia, II. 2 - 231
London, Bishop of - 242

MARTIN'S, ST., IN-THE-FIELDS (Drury Lane) 245
Depth of Graves, 2 - 228

Mary's, St. (Birmingham) - 245
Metropolitan Churchyards - 245
Mortality - 246
Pancras Road Cemetery - 247
Paris - 247
Parish Clerks - 248
Prohibition of Interments in Towns - 248

QUICK LIME:
1. *Whether any advantage would proceed from putting it into Coffins* - 249
2. *Objection of the Middling and Lower Classes to the use of it* - 249
3. *Use of it in all the Grounds, particularly at Enon Chapel* - 250

Portugal - 248

Relatives - 250

ST. CLEMENT DANES - 251
Bones - 219
Vaults - 255
Water - 256

SOUTHAMPTON - 252
Cemeteries, 2 - 223
Health of Large Towns, II. 6 - 238

SPAIN - 253
Barcelona - 219

Stephen's, St. (Coleman-street) - 253
Stepney - 253
Strand, The - 253

TYPHOID FEVER - 254
Ague - 217
Sulphuretted Hydrogen - 253

Unconsecrated Ground - 254

VAULTS - 255
Churches - 224

WATER:
I. *Injurious Effects of the Mixture of Animal Matter with it* - 256
II. *Advantages of bringing it from the Country by Pipes into the Town* - 257
III. *Qualities of it near particular Churchyards* - 257

West London and Westminster Cemetery - 257
Westminster Abbey and St. Paul's - 257

WHITECHAPEL - 257
Cemeteries, 2 - 223
Depth of Graves, 2 - 228
Effluvia, II. 2 - 231

INDEX.

[*Note.*—In this Index, *Rep.* refers to the page of the Report of the Committee; the *Figures* following the Names of Witnesses to the Number of the Question in the Evidence; and *App.* to the page of the Appendix.]

A.

Abdy, Rev. *J. C.* (Analysis of his Evidence.)—Was formerly curate of St. George's, Southwark, 1316——Trusts that no law will be passed to prohibit funerals in London churchyards, 1317——The descendants of persons buried there expect to be buried there themselves, 1318——Moral and religious influence of burials round a church, 1318——Burials were permitted in the vaults of St. George's without leaden coffins, and the vaults were so offensive that the clergyman read the funeral service outside, 1320. 1322–1325. 1327–1329——State of the Lock burial-ground in the Dover-road, for paupers; piles of coffins, bones, &c., 1320, 1321. 1326——It is still used, and 19 years ago witness thought it was scandalous to go on burying there, 1330–1335——Sunday funerals cause a desecration of the Sabbath, but could not be prevented without great loss to the labouring poor; shopkeepers are often buried as well as the poor on Sunday, 1336–1341.

Practice in St. John's, Southwark, in digging graves of a certain depth, and removing coffins if in the way, and re-interring them, 1342–1354——Negotiations between the parishes of St. John and St. Olave, Southwark, and the Greenwich Railway Company, as to the providing of a burial-ground in lieu of the Flemish burial-ground taken for the purposes of the railway, 1355–1368.

[Second Examination.]—Description of, and objections to, a burial-ground called Butler's ground, in the parish of St. John's, Southwark; mode of burying in this ground, 1552–1560——The person who officiates as minister is only the undertaker's man, who acts on other occasions as a porter, 1561–1563——Charges made for burial in this ground, 1564——Explanation of former evidence, 1565.

Acton, Colonel, M. P. (Analysis of his Evidence.)—Has visited some places mentioned in the evidence, 1282–1284——Was refused admittance at Enon Chapel, 1285; and to the vaults of St. Clement Danes' church, 1286, 1287——Saw enough to convince him that the general evidence concerning the injury done to the health of the inhabitants by grave-yards is perfectly borne out, 1288, 1289. 1294. 1297——Saw bones lying exposed in all the grounds, 1291——Observed that the boards of Enon Chapel were very loose from the floor, 1292, 1293——Enon Chapel was stated to be intended to be used for a temperance society, and as a school-room for Roman-catholic children, 1295——The vault of the chapel is directly connected with a sewer, 1296——A pump near St. Clement Danes has been shut up, as the water was found unfit for use, 1298, 1299——From the violence of the keeper of Enon Chapel, witness believes a great body of injurious matter to be concealed there, 1300——Is decidedly of opinion that interments should take place out of town, 1301.

Adams, Dr. Letter from W. O'B. Adams, M. D., 25 April 1842, to the Chairman of the Committee, respecting the state of the burying-grounds at Kingstown, and the measures taken for the establishment of cemeteries near Dublin, *App.* 198.

Ague. Agues are less frequent in London than formerly; they arise chiefly near the river, *Copland* 2672——Witness confirms Dr. Copland's observations respecting ague and typhus fever, *Lynch* 2691, 2692.

Ainsworth, Peter, M. P. (Analysis of his Evidence.)—Has lately visited burial places in London, 1303, 1304——Was refused admittance into Russell-court burying-ground, 1305; and into the vaults of Enon Chapel, 1306, 1307——Those who lived near Portugal-street burial-ground complained of the odours arising therefrom in hot or rainy weather, 1308——Observed a hole in the ground, which one of the gravediggers said was to let the gaseous matter escape from a coffin, and that it was a common practice in St. Martin's, 1308, 1309——The gravediggers in Portugal-street stopped working when witness began his inquiries, 1312, 1313——The houses overlooking the church-yard must be very unhealthy, 1314.

Report, 1842—*continued.*

Aldgate Churchyard. The carbonic acid and other gas destroyed the men in Aldgate churchyard in 1838, *Walker* 819, 820——Case in which two deaths occurred from opening a grave in Aldgate churchyard, *Atkinson* 2284–2286——Aldgate churchyard has always been considered one of the worst and most crowded in the city, *Harvey* 1808. 1810. 1823–1825.

Alexandria. Removal of the burial places out of the town of Alexandria; many of the old burying places have lately been built on; plan adopted for the burial of the dead in the new cemeteries; the health and appearance of the town was much improved by these measures, *Campbell* 1865–1868.

Allhallows-on-the-Wall. Statement as to the position and unhealthiness of the rectory-house of Allhallows-on-the Wall, *Russell* 2501, 2503.

Anderton, James. (Analysis of his Evidence.)—One of the common council, 1510——At St. Martin's, Ludgate, there is no churchyard, and paupers have been buried in the vaults in common wooden coffins; cartloads of decayed coffins, &c. were lately carted away; the Bishop of London has directed that no further interments should take place under the church, 1512–1514——The effluvia were most offensive, and must be injurious to health, 1515, 1516——The state of the churchyards in the metropolis is disgraceful to a civilized country, and the general feeling is against further interments in them, 1517–1519.

[Second Examination.]—Solicitor, and member of the common council of the city, 2229——State of St. Margaret's churchyard described, 2230, 2231——Churchyards in London and Westminster, which are thoroughfares, enumerated, 2232, 2233——Witness considers St. Clement Danes little better than burying in our town streets, and also St. Paul's, 2233——Complaints made of the effluvium, and bad effects from the churchyards, by persons residing near them, 2234——St. Paul's churchyard is very full, 2236——All the parish burial-grounds within the bills of mortality are a disgrace to the country, 2237, 2238——Proper legislative enactments which might be framed respecting them, 2239–2246——Witness would prohibit the burial of all classes, either rich or poor, in the present churchyards, 2247——Probable prejudice among the middling and lower classes to a law that there should be a quantity of quick lime put into the coffin, 2248.

Andrew, St., Holborn. The burial-ground is very full, *Carr* 705, 706——The churchyard, bounded by the wall, has only been sparingly used lately, *Baldock* 1911, 1912——Size of the churchyard, *Ib.* 1914, 1915——The vaults under the church are very well ventilated; they are formed on arches; still the miasma escapes, *Lynch* 2689, 2690——Amount of burial fees in 1838, 1839, and 1840, *Bishop of London* 2949.

General approbation expressed of some measure which would put an end to interments in populous places, *Robinson* 2809.

Andrew, St., Undershaft (St. Mary Axe.) Distressing state of the churchyard; accumulated mass of putrescent bodies; exhalations therefrom, *Knapp* 907——Excessive fulness of the churchyard, *Ib.* 908–911——Frequent cases of illness of ladies during Divine service, *Ib.* 916–918——Size of the churchyard; it is enclosed from the street; it is about two feet higher than the level of the pavement; cause of this, *Harvey* 1749–1754——Distance between the churchyard and the adjoining houses, *Ib.* 1755, 1756——Number of burials on an average in the course of the year, *Ib.* 1757–1759.

The churchyard may be buried in for ten or a dozen years to come, *Harvey* 1769——There is one vault in the church, the entrance to which is outside; there is an air-pipe to afford ventilation; the vault has been closed, with one exception, for 20 years; it is full, *Ib.* 1789–1792. 1797, 1798.

See also *Depth of Graves,* 2. *Destruction of Coffins. Effluvia,* II. 2. *Health* II. 5.

Ann's, St., Soho. The churchyard is level with the street, *Copeland* 1387–1389.

See also *Depth of Graves,* 2. *Destruction of Coffins. Effluvia,* II. 2. *Fox,* Mr. *Gases,* 2. *Mutilation of Dead Bodies. Skittles. Water,* III. 1.

Armstrong, Dr. Case of Dr. Armstrong, who died of consumption from dissecting a lady who had died consumptive, *Walker* 885.

Atkinson, John Charles. (Analysis of his Evidence.)—Surgeon, residing at Romney-terrace, Westminster, 2249, 2250——Opinion with regard to removing interments from large towns, 2251, 2252——Virulent effect of the gas emanating from coffins; that emanating from leaden coffins is more injurious than that from wooden ones, 2253–2261. 2266——The effluvia from a human body are not more injurious than those arising from any other animal, 2262–2265——The gas emanating from the vaults under the Strand must be injurious to the health of the inhabitants, 2267–2274——The health of the metropolis would be improved by removing the grave-yards from its precincts, 2275–2283——Case in which two deaths occurred from opening a grave in Aldgate churchyard, 2284–2286——Distance at which it would be perfectly safe to the health of the inhabitants to have the grave-yards, 2287–2292.

Baker,

Report, 1842—*continued.*

B.

Baker, Robert. (Analysis of his Evidence.)—Surgeon at Leeds, 2504–2506——Resides close to the parish burial-ground; insufficiency of the ground for the deaths that take place; peculiar cases which have come to his knowledge in support of this assertion, 2507–2511——State of the different churchyards in Leeds, with reference to the population, 2512, *et seq.*——Necessity for the enlargement of the grounds; refusal of a rate for that purpose, 2515–2534——The cholera was most violent near the parish burial-ground; and fever is most prevalent there, 2535–2553——The position of St. Peter's burial-ground is the worst part of the town, 2554——A legislative enactment, prohibiting the interment of the dead within the precincts of the town, would be absolutely essential to health, and most acceptable indeed, 2455. 2562–2566——There would be a strong prejudice among the middling and lower classes to the use of quick lime, 2556. 2583, 2584——Mode in which witness would purchase a burial-ground for the town of Leeds, and buy out the rights of the clergy; in whom the control and superintendence should be vested, 2557–2559. 2567–2579.

Amount of population of the township of Leeds; average deaths, 2560, 2561. 2565, 2566——A portion of the ground should be given to the Dissenters, 2562, 2563——Dr. Hook is favourable to witness's views, 2565–2579——Depth at which it is common to bury in Leeds, 2580——State of the vaults under St. Paul's church, Leeds; swarms of insects in them, 2588, 2589——Situation of other great towns near Leeds as to their burying-grounds, 2591–2598——Interment in churches is likely to be injurious to the health of the inhabitants, 2599, 2600——Interment in leaden coffins is not a safeguard against effluvium unless they are of a certain thickness, 2601–2604——Witness does not know a burial-ground in any of the great towns of Yorkshire but what is objectionable, 2606.

Baker, Mr. Witness coincides with the evidence given by Mr. Baker in every respect, *Beckett* 2607, 2608——Witness confirms Mr. Baker's evidence with respect to the town of Leeds, in all points except one, the demand for a shilling rate, *Garland* 2901.

Baldock, Robert. (Analysis of his Evidence.)—Bookseller in Holborn; churchwarden of the parish of St. Andrew, Holborn, 1907——Witness requests that evidence may be given to show the fact, that there is not the nuisance stated to be permitted to take place in their burying-place in Shoe-lane, 1907——Witness's own testimony in support of this assertion, 1907–1910——Evidence respecting the addition of the new ground, 1908, 1909. 1921, 1922——The churchyard, bounded by the wall has only been sparingly used lately, 1911, 1912——Size of the churchyard, 1914, 1915——Suggestions as to the relief of the expense of burials to poor persons; the poor do not like to accept gratuitous burial, 1916–1919. 1923, 1924. 1926, 1930——They would not object to their friends being buried in cemeteries out of town at a reasonable cost, 1920——Quicklime being put into coffins to destroy the body in less time, would outrage the feelings of the poor, 1925.

Barcelona. Facts connected with the burial of the dead in Spain, particularly in Barcelona, *Campbell* 1860–1864.

Beasley, Mr. Circumstances attending the burial of persons named Clark and Beasley, at St. Clement Danes, *Eyles* 1189, 1190.

Beaumont, Barber. Mr. Barber Beaumont established a cemetery at Stepney, about five or six years ago; they bury there to the number of 1,000 a year, *James* 2706.

Beckett, William, M. P. Witness coincides with the evidence given by Mr. Baker in every respect, 2067, 2608——Evidence respecting the refusal of a rate for the purchase of a new burial-ground for the town of Leeds, 2609–2612.

Belfast. Letter from Mr. Thomas Verner, sovereign of Belfast, dated 17 May 1842, to the Chairman of the Committee, relative to the burial-grounds of Belfast, *App.* 206, 207.

Bermondsey Old Church. See *Butler's Burial-ground.*

Bethnal-green. Filthy and disgusting state of Bethnal-green church-yard, *Miller* 1661, 1662——Unhealthiness is most prevalent in the city, in the neighbourhoods of Spitalfields and Bethnal-green, *Harvey* 1829.

Bishop's Stortford. See *Church Building Commissioners.*

Bishopsgate Parish. Size of the churchyard, &c. *Russell* 2444——There are constant disputes arising out of the present system of interment; it would be a great satisfaction to witness if it were removed, *Ib.* 2496–2500.

See also *Burial Fees. Fraudulent Burials.*

Blair, Dr. Letter from Charles Edward Blair, M. D., churchwarden of St. James, Colchester, dated 4 May 1842, to Mr. William Sparling, town-clerk of Colchester, giving information as to the state of the churchyard in that parish, *App.* 206.

Bones. Witness has seen bones lying about exposed in all the churchyards which he has visited, *Acton* 1291——Bones are found in the cellars of houses near Leadenhall-street; in St. Mary Axe, there is in one of the cellars a place full of bones, *Harvey* 1799-1801.

Report, 1842—*continued.*

Bones—continued.

Enon Chapel.—Witness was employed in removing rubbish, bones, &c. from under Enon Chapel to Waterloo-road, *Burn* 260–267——Quantity of bones and broken coffins among the rubbish, *Ib.* 268–271.

St. Ann's, Soho.—Practice with regard to the removal and burying of decayed coffins and the burial of bones, *Lyons* 1060–1065.

St. Clement's Churchyard (Portugal-street).—Bones are thrown up in digging in this churchyard; they are taken to the bone-house, *Eyles* 363–370——At one time quantities of bones were removed there, and will not be disturbed for centuries, *Ib.* 371–378.

St. Martin's-in-the-Fields.—Witness has seen bones, entrails, and coffins, not decayed, thrown up in digging graves; the bones are removed and thrown down a flap, *Munns* 580–583.

St. Mary's-in-the-Strand and *St. Clement's.*—Witness has removed earth from St. Mary's-in-the-Strand and St. Clement's; they are more careful of the bones there than they were at Enon Chapel, *Burn* 298, 299.

See also *Sepulchre's, St. Skittles. Spa-fields Burial Ground. Stepney.*

Botolph, St., Bishopsgate. The churchyard is getting rather full, but they have enlarged it lately by pulling down the rectory house, *Harvey* 1826——While residing in the rectory house of St. Botolph, Bishopsgate, in the churchyard, neither witness's own health nor that of his children was at all affected, nor on removing thence was it sensibly improved, *Bishop of London* 2948.

Bowring, John, LL. D., M.P. (Analysis of his Evidence.)—Evidence respecting the modes of burying the dead in various countries in Europe, and in the east; cemeteries are general now in all countries, 1832. 1847. 1850–1858——How public taste would be improved by the establishment of cemeteries, 1832–1834. 1848——There should be an Act, absolutely prohibiting burials in towns; no other interference could accomplish the end, 1835——Doubt as to whether quick lime introduced into coffins would prevent putrid smells, 1836–1838——Cemeteries for the poorer classes might be near the town, which would not add much to the expense of burial, 1839, 1840——Measures recommended for giving compensation to the clergy in respect of the burials in the old churchyards, 1843–1846.

Bradford. Letter from Mr. William Brigg, mayor of Bradford, dated 19 April 1842, to the Chairman of the Committee, giving information respecting the burial-grounds of the borough, *App.* 202.

Brierly, Mr. Letter from Mr. John P. Brierly, head constable of Oldham, dated 19 April 1842, to the Chairman of the Committee, respecting the state of the burial-grounds in the borough and in the out-townships, *App.* 202.

Brigg, Mr. Letter from Mr. William Brigg, mayor of Bradford, dated 19 April 1842, to the Chairman of the Committee, giving information respecting the burial-grounds of the borough, and recommending a public cemetery, *App.* 202.

Bristol. Letter from Mr. Charles Savery, dated 18 March 1842, to the Chairman of the Committee, giving information respecting the state of the grave-yards of Bristol, *App.* 205, 206.

Brodie, Sir *Benjamin.* (Analysis of his Evidence).—The effluvia of putrid bodies are always injurious to human health, and if allowed to escape in large towns, must injure the health of the inhabitants, 2908——The interment of bodies in so large a town as London must be injurious, especially in hot weather after rain, 2909–2911——Sulphuretted hydrogen is evolved from putrid bodies, which is so noxious that 1 part in 500 of atmospheric air is fatal; a less proportion may produce typhus or putrid fever, 2912——Effects of opening a sewer near Manchester-square, 2912. 2918——Case of a patient of witness, 2912. 2922–2926——In one condition of the system a body may resist the poison and in another not resist it all, 2913——With the present mode of interment noxious gases must escape; if the dead were buried 30 feet deep, perhaps they might be neutralized, and at all events would be greatly diluted, 2914–2916.

Effect of chloride of lime in removing noxious smells in sick rooms, 2917——Witness considers the crowded state of the churchyards as one cause of fever and disease; the dense population in courts and alleys another, and want of sewerage another, 2918–2921——Position of King's College Hospital; no more bodies should be buried there, 2927–2929. 2931, 2932.——An area for ventilation, unobstructed by buildings, is a compensation, as far as it goes, for the purposes to which a churchyard is applied, 2930——The books of King's College Hospital would show what diseases have prevailed there, 2934–2937——Quick lime put into each coffin would have the effect of destroying the body and of preventing effluvia, 2938.

Broadway (Westminster.) The poor of St. Margaret's are generally interred in the Broadway churchyard; it is a crowded churchyard, *Milman* 2748–2750.

Report, 1842—*continued.*

Bryn-y-gevin (North Wales.) Letter from Mr. Hugh Reveley, J. P., dated 17 March 1842, to the Chairman of the Committee, respecting the practice prevailing in this parish of burying corpses in the body of the church and without leaden coffins, *App.* 206.

Burial Fees:

1. *Generally.*

2. *At particular Churches and Burial-grounds.*

Generally:

Proposed rate of 1 *d.* in the pound to defray extra expenses of burial, and to remunerate the clergy, *Knapp* 934-938——Burial fees of certain London parishes stated, in order to show how dependent many of the clergy are upon that source of income, *Bishop of London* 2949-2952.

The cemetery fees payable to clergymen should only apply to burials in consecrated ground, but the fees should be so managed as not to hold out a premium to people to be buried in unconsecrated ground, *Bishop of London* 2997-3000——The crowded state of London churchyards drives some burials to private grounds, and diminishes the fees; the cemetery fees should be adjusted with reference to this circumstance, *Ib.* 3019-3023——Burial fees of different parishes in the years 1838, 1839 and 1840, handed in, *Ev. p.* 194.

2. *At particular Churches and Burial-grounds:*

Bishopsgate.—Amount of burial fees at Bishopsgate church, *Russell* 2469, 2470——At Bishopsgate the fees are very low, and no charge has been made for paupers during the time of three or four rectors, *Ib.* 2477-2480.

Butler's Burial-ground (St. John's, Southwark.)—Charges made for burial in this ground, *Abdy* 1564.

Enon Chapel.—The smallness of the fee induced great numbers of the poor to be buried in this chapel, *Pitts* 187-192——Amount of the fee, *Pitts* 197, 198.

St. Giles'-in-the-Fields.—Fees in the churchyard and in the cemetery respectively, *Tyler* 1425-1428——Before the Anatomy Act people were so anxious to be buried in front of the church, where there were lights, that witness was obliged to raise the fees, *Ib.* 1428——Witness would be a loser if all burials were prohibited in London, unless they continued in his new burial-ground, *Ib.* 1479-1486——There are double fees on extra-parochial dead, *Ib.* 1497.

See also *Andrew's, St.* (Holborn). *Fraudulent Burials, Paddington. George's, St.* (Bloomsbury). *George's, St.* (Hanover-square). *Parish Clerks. Sextons. West London and Westminster Cemetery. Whitechapel.*

Burn, William. (Analysis of his Evidence.)—Master carman, residing in King's Head Yard, Duke-street, Lincoln's Inn Fields, 257-259——Was employed in removing rubbish, bones, &c. from under Enon Chapel, to Waterloo-road, 260-267——Quantities of bones and broken coffins amongst the rubbish, 268-271——The greater portion of the earth removed was human bodies in a state of putrefaction, 271-273——The burials were very numerous, 274-277——It was believed that bodies were slipped down the sewer, otherwise the place could not have contained so many; this made the commissioners strict in bricking it over, 278-281——There must have been at least 20 interments a week, 282-284——The place appeared full, and yet the burials continued at the same rate for years afterwards, 285-290——General unhealthiness of the neighbourhood, bad drainage, &c., 291-294.

Sickness experienced by witness in removing earth from the Savoy burial-ground, 295-297——He has removed earth from St. Mary's in the Strand and St. Clements; they are more careful of the bones there, 298, 299——Has no doubt that three times as many persons die in the street near Enon Chapel, than in any other part of the parish, 302——Baptist chapel in Little Wild-street, Lincoln's Inn Fields; respectable mode of burying the dead there; still there is a bad smell in summer time, 306-313——Witness has been of opinion for years that burying the dead at Enon Chapel and in Wild-street is injurious to the health of the neighbourhood, 314, 315.

Butler's Burial-ground, (St. John's Southwark.) Description of, and objections to, a burial-ground, called Butler's Ground, in the parish of St. John's, Southwark; mode of burying in this ground, *Abdy* 1552-1560——The person who officiates as minister is only the undertaker's man, who acts on other occasions as a porter, *Abdy* 1561-1563——Charges made for burial in this ground, *Ib.* 1564.——*See* also *Burial Fees.*

C.

Cambridge. Letter from John Haviland, M. D., dated 27 April 1842, to the Chairman of the Committee, respecting the situation and state of the churchyards of the town, and their effects upon the health of the inhabitants, *App.* 198——Return, 21 April 1842, of the clergy and churchwardens of the several parishes in the borough of Cambridge, relative to the state and extent of the churchyards within the borough, together with a

Report, 1842—*continued.*

Cambridge—continued.

return from the Dissenting ministers officiating in the town, relative to the burial-grounds attached to their chapels, *App.* 200——Letter from Mr. George Fisher, mayor of Cambridge, dated 25 April 1842, to the Chairman of the Committee, respecting the state of the burial-grounds of that town, and their effects upon its general health, and also the measures taken for the establishment of a cemetery, *Ib.*

Campbell, Colonel *Patrick.* (Analysis of his Evidence.)—Consul-general in Egypt from the beginning of the year 1833 to the end of December 1839; also agent for the East India Company, 1859——Facts connected with the burial of the dead in Spain, particularly in Barcelona, 1860–1864——Removal of the burial places out of the town of Alexandria; many of the old burying places have lately been built on; plan adopted for the burial of the dead in the new cemeteries; the health and appearance of the town was much improved by these measures, 1865–1868——Witness is not of opinion with Sir Joseph de Courcy Laffan, that the plague has in some instances arisen from the putrefaction of bodies in towns, 1869.

Canterbury, Archbishop of. Letter from his Grace the Archbishop of Canterbury, dated 15 March 1842, to the Chairman of the Committee, with reference to the subject of the inquiry, *App.* 205.

Carlisle. Letter from Mr. G. G. Mounsey, mayor of Carlisle, dated 23 April 1842, to the Chairman of the Committee, respecting the state of the burial-grounds of that city, *App.* 199.

Carlow. Letter from Dr. Shewbridge Connor, dated 29 April 1842, to the Chairman of the Committee, respecting the state of the churchyards and prevalence of typhus fever in the town of Carlow, *App.* 197, 198.

Carr, Robert. (Analysis of his Evidence.)—Carpenter and undertaker in Duke-court, Bow-street, 631–633——The London burial-grounds are generally very full, and the coffins from four feet to two feet from the surface, 634–638——In some places, especially under chapels, he has suffered from offensive effluvia, 639–641——At Spa-fields there are very numerous funerals, but coffins are rarely seen when graves are open; the sides of graves are seen boarded with parts of coffins broken up, 642–653——The burial-ground is surrounded by houses, but witness would not think the health of people affected, 656–659——Spa-fields is a better burial-ground than many parochial burial-grounds; it is more open, and there are not so many bones lying about, 660–664——Witness often has an unpleasant taste in the throat after attending funerals, 665–669.

Illness caused in his family by having a dead body in the house, 670–674——Injurious practice of the poor in keeping bodies too long before they are buried; drunken character of their funerals, 675–682——Poor people would have a strong prejudice against having quick lime put into the coffins, 683–685——Amount of additional expense in burying out of town, 686——The burial-grounds of St. Mary-le-Strand and Portugal-street are both so bad that you can hardly tell the difference, 687–690——The Savoy burial-ground is made into a garden, and is the finest little ground in London, 691–694——St. Mary-le-Strand burial-ground is raised about four feet above the surrounding level, 695–699——The burial-grounds in the city are very small, and burials are not very frequent there, 704——St. Andrew's Holborn is very full, 705, 706.

Catacombs. Practice of the Church-building Commission to sanction the building of catacombs under churches, arched with brick or stone, and having no entrance within the church; no evil has arisen from interments there, *Bishop of London* 2948.

CEMETERIES:

1. *Generally.*
2. *How far conducive to the Health of Large Towns.*
3. *Expense of them, especially with respect to the Burial of the Lower Classes.*
4. *Distance at which they should be situated from Towns.*
5. *Evidence respecting Cemeteries in Foreign Countries.*

1. *Generally:*

Chief difficulties of establishing cemeteries near large towns enumerated, *Rep.* v.——Parishes or unions of parishes in certain towns to raise money by rates for forming cemeteries at a certain distance, *Ib.* vi.——Remarks upon different cemeteries in the neighbourhood of London, *Walker,* 866–871——How public taste would be improved by the establishment of cemeteries, *Bowring* 1832–1834. 1848——If the Legislature determine to discontinue burials in towns, public cemeteries is the only plan which could be adopted, with a certain reservation of rights to the clergy, *Milman* 2728——Sources of expense which would be incurred by the change, *Ib.* 2729, 2730——Propriety of Government undertaking the establishment of cemeteries considered, *Bishop of London* 2972, 2973.

2. *How*

Report, 1842—*continued.*

CEMETERIES—continued.

2. *How far conducive to the Health of Large Towns:*

It would be advisable to bury all persons out of town, but the working classes could not afford it, *Whittaker* 563, 564——Witness is decidedly of opinion that interments should take place out of town, *Acton* 1301——Witness would have all dead bodies removed from towns and from places where people live, *White* 2054–2056——The health of the metropolis would be improved by removing the grave-yards from its precincts, *Atkinson* 2251–2253——It is witness's decided belief that interments in the town of Southampton are injurious to the health of the inhabitants, *Deacon* 2647.

Speaking generally with regard to London, witness is decidedly of opinion that large cemeteries on each of the four sides of London would be a great advantage, *James* 2723, 2724——Witness (Rector of Whitechapel) has joined in a petition to Parliament that interments should take place outside of large towns, *Champneys* 2861, 2862. 2876, 2877——This is the general feeling of his parishioners, *Ib.* 2862——The present system of burying in grave-yards is prejudicial to the population of large towns; the only remedy would be providing burial-grounds at a distance, *Yates* 2896, 2897——The interment of bodies in so large a town as London must be injurious, especially in hot weather after rain, *Brodie* 2909–2911——The evils resulting from interments in town are much exaggerated, and would not arise with proper care, *Bishop of London* 2948.

3. *Expense of them, especially with respect to the Burial of the Lower Classes:*

Amount of additional expense in burying out of town, *Carr* 686——Additional expense of the funeral of a person of the lower class, supposing the burial-ground at a distance of two or three miles, *Harker* 1981–1992——The poor would not object to their friends being buried in cemeteries out of town at a reasonable cost, *Baldock* 1920.

Modes of obviating the expense of burying in distant cemeteries described, *Knapp* 923–927——The expense to a populous parish of obtaining a burial-ground out of its precincts and conveying the bodies of the poor would be very trifling, *Hewson* 1899——There is no reason why the poor should not be buried in the cemeteries as well as those that can afford to pay; it might be done by contract, *Lane* 2313–2316——Arrangements might be made by parishes or unions with the cemeteries for the burial of paupers, *Russell* 2490–2492——A cheap and decent hearse might be provided for the use of the poor, *Bishop of London* 2948.

4. *Distance at which they should be situated from Towns:*

Minimum and *maximum* distances for such cemeteries to be fixed, *Rep.* vi. vii.——Cemeteries, if on high ground, might be very near a large town with safety, *Walker* 832——Grave-yards should be in high and dry situations, *Ib.* 858, 859——Cemeteries for the poorer classes might be near the town, which would not add much to the expense of burial, *Bowring* 1839, 1840——Distance at which it would be perfectly safe to the health of the inhabitants to have the grave-yards, *Atkinson* 2287–2292.

Grave-yards ought to be at a distance from London, *Walker* 843——Cemeteries should not be less than two miles from London, as buildings are extending so rapidly, *Copland* 2673——How far the distance of the cemetery would be considered a hardship by the parishioners of St. Giles's, *Tyler* 1487–1496——Some local authority should determine where a cemetery should be, *Bishop of London* 2982–2984

5. *Evidence respecting Cemeteries in Foreign Countries:*

Evidence respecting the modes of burying the dead in various countries in Europe, and in the east; cemeteries are general now in all countries, *Bowring* 1832–1847. 1850–1858——The burial of the dead in towns is daily less in practice abroad, *Ib.* 1832——The cemeteries in the neighbourhood of Paris are many of them agreeable and healthy walks, *Ib.*

See also *Beaumont, Barber. Burial Fees. Clergy*, 1, 2, 3. *Dissenters. Dunstan's, St.* (Stepney.) *Frankfort. Leonard's, St.* (Bromley). *Mahomedans. Margaret, St.* (Westminster). *Paris. Spain. Stepney. Victoria Park. Whitechapel.*

Chamberlain, William. (Analysis of his Evidence.)—Gravedigger at St. Clement's; dreadful state of this churchyard; practice with regard to the destruction of coffins and bodies on the occasion of fresh burials, 2341–2346. 2349–2365. 2402–2405——Illness of witness from his employment as gravedigger, 2347, 2348. 2366–2380. 2385–2391——He has been driven to drinking by his employment, 2381–2384——His wife is afflicted with the same complaint that he is; the doctors term the complaint catching, 2392——Emolument derived by the sexton from the burials, 2393–2401.

Chambers, Dr. Letter from W. F. Chambers, M. D., to the Chairman of the Committee, dated 2 May 1842, respecting the effect of burying-grounds on their vicinities, *App.* 196.

Champneys, Rev. *William Weldon.* (Analysis of his Evidence.)—Rector of Whitechapel, 2860. Although witness has had no personal experience of any injurious effect, nor felt any personal inconvenience from interments in his own neighbourhood, he has joined in a petition to Parliament, that interments should take place outside of large towns, 2861, 2862,

Report, 1842—*continued.*

Champneys, Rev. *William Weldon.* (Analysis of his Evidence)—*continued.*

2862. 2875–2877——This is the general feeling of his parishioners, 2862——Size of witness's burial-ground; average annual number of interments, 2863, 2864——Some of his parishioners are buried in Sheen's burial-ground, which stands within a stone's throw of the church; size of it, 2865–2867——Regulation as to the depth at which bodies should be buried; difficulty of stating the distance between the highest coffin and the surface, 2868–2871.

Probable objection of the ratepayers to a rate for the purchase of a new cemetery, 2873–2875——If a sum were so raised, a portion of the ground should be set apart for Dissenters, 2878. 2884–2889——In whom, in the event of a legislative enactment, the parochial authority for purchasing land and superintending all the necessary arrangements should be vested, 2879, 2880——Where the parish is sufficiently large to have a cemetery of its own, the clergyman of the parish church and his assistant should have the jurisdiction, 2881–2883——The church of Whitechapel is a rectory; the income is raised partly from fees, and partly from the tithe, 2891——The principal part of the parish clerk's emolument is derived from the burials, 2893, 2894——The fees are heavy for interment in the church, 2895, 2895*.

Chelsea. Remarks of Mr. Wakley as to the mode of burying in Chelsea, *Walker* 878.

Chloride of Lime. If chloride of lime could be introduced into all coffins it would be beneficial, but the feeling would be against it, *Walker* 896–898—— Effect of chloride of lime in removing noxious smells in sick rooms, *Brodie* 2917.

Cholera. See *Health*, II. 5. *Leeds. Prout*, Dr.

Christchurch (Spitalfields). Amount of burial fees in 1838, 1839 and 1840, *Bishop of London* 2952.

Church of England Burial-grounds (Metropolis). The Church of England burial-grounds are as crowded as those of Dissenters, *Whittaker* 546.

Church Building Commissioners. The Church Building Commissioners may apply to the Court of Queen's Bench for a mandamus to compel parishes to purchase additional burial-ground; cases of Watford and Bishop's Stortford in Hertfordshire, *Bishop of London* 2968, 2969——Acts regulating the powers of the Church Building Commissioners in establishing new burial-grounds on the application of the parish authorities, *Ib.* 3006–3012——The consolidation of the Church Building Acts is in progress, and the Commissioners would willingly undertake the responsibility of determining in what town new burial-grounds should be provided, *Ib.* 3013, 3014.——*See* also *Catacombs.*

Churches. Opinion of the Bishop of London that interments under churches are objectionable, noticed, *Rep.* v.——Inconvenience of burying in churches; instances at St. Michael's, Wood-street, and St. Michael's, Queenhithe; at Bishopsgate no real inconvenience has been felt from burials, *Russell* 2444. 2455——Interment in churches is likely to be injurious to the health of the inhabitants, *Baker* 2599, 2600——Witness is not aware of any evil being produced by burying under churches and chapels; in what the burying in churches originated; within the last century it has been prohibited in a great portion of the large capitals of Europe, *Milman* 2734——No bodies should be allowed to be buried under churches, except in leaden coffins of a certain thickness, *Bishop of London* 2948.

See also *Leaden Coffins.*

Churchyards. Moral and religious influence of burials round a church, *Abdy* 1318——It is generally felt as a nuisance to have overcrowded burying-grounds in country places, *Hewson* 1906.

Grave-yards in large towns, under good management, are beneficial, as they leave large open spaces, *Tyler* 1468——If only a few bodies are buried in the open grounds of large cities, the space left prevents building and assists ventilation, *Copland* 2667——An area for ventilation, unobstructed by buildings, is a compensation, as far as it goes, for the purposes to which a churchyard is applied, *Brodie* 2930.——*See* also *City.*

City of London. The burial-grounds in the City are very small, and burials are not very frequent there, *Carr* 704——Some of the churchyards in the City are far better than others; some are not as they ought to be; state of several of them described, *Harvey* 1805–1831.

Ciudad Rodrigo. Effect observed by Sir J. Macgregor at Ciudad Rodrigo as produced upon the health of the troops by the burial of the dead, *Copland* 2660.

Clapham. There are no funerals at Clapham on the Sunday; they would refuse to bury, *Abdy* 1338.

Clare Market. Statement as to the numerous deaths near Clare-market, and the assumed causes, *Irwin* 111–116——Bad drainage of Clare-market and the streets adjoining, *Ib.* 117–122.

Clark, Mr. Circumstances attending the burial of persons named Clark and Beasley at St. Clement Danes, *Eyles* 1189, 1190.

Report, 1842—*continued.*

Clement's-lane Burial-ground. There is a burial-ground at the bottom of Clement's-lane, belonging to St. Clement Danes, *Irwin* 321, 322——Number of burials there weekly, *Lane*, 713–716——Witness has frequently attended patients in Clement's-lane; he has always considered it as an infected district, *Walker* 790——Offensive effluvia arising from the burial-ground called the Poor-ground at the bottom of Clement's-lane, *Ib.* 799.

See also *Depth of Graves*, 2. *Destruction of Coffins. Effluvia*, II. 2. *Health*, II. 1. *Insects. Mortality.*

Clergy:

1. *Whether the Management and Superintendence of Cemeteries should be vested in them.*
2. *Compensation which should be made to them, in the event of a Legislative Enactment for Interments out of Towns.*
3. *Their willingness to make some Sacrifice for the sake of an Improvement.*

1. *Whether the Management and Superintendence of Cemeteries should be vested in them:*

The authority for purchasing land or conducting the interment of paupers might be well vested in the minister and churchwardens for the time being, *Russell* 2493–2495——The power should be vested in the clergy in the event of a legislative enactment, *Milman* 2731–2733——Whether, while continuing to them their vested rights, it would be desirable to require from them the superintendence and direction of the cemeteries, *Robinson* 2818–2829.

Where a parish is large enough to have a cemetery of its own, the clergyman of the parish and his assistant should have the jurisdiction, *Champneys* 2881–2883——If cemeteries were parochial, the rights of the clergy would be preserved; witness recommended unions of parishes for this purpose ten years ago, *Bishop of London* 2965.

2. *Compensation which should be made to them in the event of a Legislative Enactment for Interments out of Towns:*

Particular attention to be paid to the situation of clergymen whose chief source of income is from burial fees, *Rep.* vi.——Measures recommended for giving compensation to the clergy in respect of the burials in the old churchyards, provided cemeteries should be established, *Bowring* 1843–1846——Scheme by which the vested rights and the security of the existing incomes of the clergy might be preserved, *Robinson* 2814–2817——The compensation to the clergy should be in proportion to the average income, *Ib.* 2849–2856.

If an Act were passed, prohibiting the burial of the dead in the metropolis, a rate of 1*d.* in the pound would not be sufficient to remunerate the clergy for any loss of dues, *Houghton* 1587, 1588——Difficulty of making a sufficient compensation to incumbents for loss of fees, *Hewson* 1900——The clergy are differently circumstanced in regard to fees; some have nothing but fees to live upon, *Russell* 2501——Mode in which the vested rights of the clergy and other parochial authorities might be secured, *Milman* 2777–2786——If cemeteries were opened without some such provision, the emoluments of the clergy of London would be half swept away, *Ib.* 2783–2792, 2793.

3. *Their willingness to make some Sacrifice for the sake of an Improvement:*

Opinion of the Bishop of London cited, that the clergy would be willing to make some sacrifice for the sake of so great an improvement as the burial of the dead out of towns, *Rep.* v.——The present incumbents would make some sacrifice, and it might be ensured at all events from their successors; care must be taken to leave them enough for the spiritual wants of the parish, *Bishop of London* 2953–2957.

The clergy would be willing to take from the cemeteries a fair average compensation for their precarious fees, *Bishop of London* 3028, 3029——Individually witness (rector of Bishopsgate), would gain if all bodies were buried in the cemeteries, and fees allowed to the clergy of the parishes where the bodies come from, *Russell* 2481–2483——The clergy would be disposed to agree to such an arrangement, *Ib.* 2484–2487——Any legislative enactment which did not interfere with the vested rights of the clergy would be agreeable to them, *Ib.* 2502.

The clergy will be obliged to examine the books of cemetery companies, in order to secure their fees, *Bishop of London* 2948.

See also *Burial Fees. Cemeteries. Effluvia. Highgate Cemetery. Kensal-green Cemetery. Leeds. Leonard's, St.* (Bromley.) *Monuments. Prohibition of Interments in Town.*

Coffins. Unnecessary expense of coffins, *Walker* 872, 873; *Harker* 1978, 1979——Wood of which coffins should be made; description of French coffins, *Ib.* 876–879.

See also *Decomposition of Bodies. Destruction of Coffins. Leaden Coffins. Wooden Coffins.*

Report, 1842—*continued.*

Colchester. Letter from Mr. W. Sparling, town clerk of Colchester, dated 25th May 1842, to the Chairman of the Committee, giving information respecting the state of the parochial burying-grounds of that town, *App.* 206.

Collier, George Frederick. (Analysis of his Evidence.)—Medical man about this town, 2093–2095——The effluvium given from off the dead human body may be considered as one cause *inter alias* of fevers; it is likely to produce fevers of the low typhoid kind, 2096–2106. 2113, 2114. 2122——Why the openings from the vaults under the churches in the Strand to the public streets can scarcely be considered to be injurious to those who are passing by, 2107–2109——It commonly happens that people are injuriously affected in attending royal funerals, 2110–2112. 2115——Circumstances connected with cases of fever attended by witness, in the neighbourhood of Elim chapel, Fetter-lane, 2116–2121.

Compensation. See *Clergy*, 2, 3.

Complimentary Fees. Some arrangement should be made to secure the clergy a compensation, not only for the burial fees, but also what are called complimentary fees, *Bishop of London* 2948——If a union of parishes had a cemetery, with an officiating chaplain, the complimentary fees would be gradually discontinued, *Ib.* 2958–2960——The complimentary fees usually pass through the undertaker's hands; a less sum paid directly would be more satisfactory to both parties, *Ib.* 3015–3018.

Connor, Dr. Letter from Shewbridge Connor, M.D., dated 29th April 1842, to the Chairman of the Committee, respecting the state of the churchyards, and prevalence of typhus fever in the town of Carlow, *App.* 197, 198.

Consumption. The gases produced by churchyards are a very exciting cause of consumption in this country, *Walker* 894.

Copeland, Edward Charles. (Analysis of his Evidence.)—Was a grave-digger in St. Ann's, Soho, 1369, 1370——Unhealthiness of the occupation of grave-digging illustrated by witness's experience, 1371–1376. 1402——Has seen Fox, the grave-digger, and his assistants, play at skittles with the bones and skulls, 1376, 1377——Fox used to pull out the nails and handles of the coffins and sell them, 1378–1382——If a body had been buried no more than three weeks they did not mind cutting through it with pickaxes; the half-decayed flesh was left in the ground, and the bones taken to the bonehouse, 1383–1385——There is a smell arising from the churchyard, which leaves a taste as of copper in the mouth, 1386——The churchyard is level with the street, 1387–1389——There is a pump in Dean-street, close to the churchyard; the water is good, 1390–1393——Witness's health has been much better since he left off grave-digging, 1394, 1397——It was a common occurrence, under Fox, the grave-digger, to mutilate the remains of the dead, 1398–1401.

Copland, James, M.D., F.R.S., and Censor of the Royal College of Physicians. (Analysis of his Evidence.)—Circumstances that influence the health of the inhabitants of large towns, 2659——Water percolating through soils enriched by animal matter is injurious to the health of those who use it, especially in warm climates, 2659, 2660——Effect observed by Sir J. Macgregor at Ciudad Rodrigo, as produced upon the health of the troops by the burials of the dead, 2660——Filtration through a new soil will purify the water from its grosser materials, but in towns the contamination extends to a great depth, and affects the water with morbific matter, 2661, 2662——Probable cause of the diseases at Paris previously to the purification of the Seine, 2661——Form of disease suffered in Cork and several other towns, from 1817 to 1820, when it was found that the water used by the people received the common sewers, 2661.

Remarkable case that occurred in witness's practice two years since, of a gentleman who died of malignant fever caused by inhaling noxious air from the vault of a chapel; death of his wife from infection, 2662. 2664–2666——In a hospital his disease would have propagated itself to others predisposed, if the apartments were not properly ventilated, 2663——The foul air exhaled from the dead is generally so diluted and scattered by the wind as to produce no specific disease, but only a general ill effect on those predisposed, *Ib.*——Epidemics following the plague of London in 1660, caused first by the exhalation from the 100,000 bodies then buried, and secondly, by the bad water; different form of disease arising from these causes, 2667——If only a few bodies are buried in the open grounds of large cities, the space left prevents building and assists ventilation, *Ib.*——Witness has always advised persons labouring under any disease, if living near a churchyard, to move into the country, as emanations from the dead depress the powers of life, *Ib.*——Different forms of typhus fever, according to the causes from which it arises, 2668——*Vexata questio* as to the origin of typhus fever; whether infection arises from the dead as well as from the living, 2669.

The water of the Ganges and Hooghly contaminated by dead bodies has produced dysentery and putrid fever, 2670——Injurious effects of the admixture of animal and vegetable matter with water, 2671——Ague less frequent in London than formerly; it arises chiefly near the river, 2672——Character of fever arising from decayed vegetable matter, and from vegetable and animal matter together, 2672——Cemeteries should not be less than two miles from London, as buildings are extending so rapidly, 2673——Great effect of Sir Hugh Myddleton's enterprise in bringing water from a distance, in diminishing

Report, 1842—*continued.*

Copland, James, M. D. (Analysis of his Evidence)—*continued.*

diminishing disease in the metropolis, 2673——It would be to a certain extent advisable to prescribe the depth at which interments should take place, 2674, 2675——The use of quick lime and chloride of lime would be of service, and the opposition to it would be slight, 2676–2678——Practice near Naples of having 365 vaults, one for every day in the year, 2679, 2680——Nobody should be interred within six or seven feet of the surface, 2681.

Conveyance of Funerals. The conveyance of the bodies of the poor must be done by parishes, unions of parishes, or the Government, *Walker* 873, 874——If the poorer classes would use a cheap conveyance, the expense of a funeral out of town probably would not be greater than a walking funeral in town, *Bishop of London* 2985——The funeral conveyance should carry both the corpse and mourners, *Ib.* 2993–2996——The feelings of people would probably be against more than one body being carried to the cemetery by one conveyance, *Ib.* 3025, 3026.——*See* also *Cemeteries. Shillibeer,* Mr.

Cork. Form of disease suffered in Cork and several other towns from 1817 to 1820, when it was found that the water used by the people received the common sewers, *Copland* 2661.

Coventry. Letter from Mr. H. Hawkes, mayor of Coventry, date 15th April 1842, to the Chairman of the Committee, respecting the state of the burial-grounds of that town, and suggesting a remedy, *App.* 203.

D.

Damp. Objections to a damp burial ground, *Walker* 2088–2091.

Deacon, Charles Ewens. (Analysis of his Evidence.)—Town clerk of Southampton, 2615——Great want of accommodation for the burial of the dead in that town, 2616——The common burial-ground for the town is only two acres two roods, in the heart of the town; has been used for 500 years, and in the last four or five the average number of burials has been 500, 2617–2621——The borough council determined to apply to Parliament for a cemetery on the common, but await a general measure, 2621——Difficulty in obtaining the consent of the rate-payers to take part of the common, 2622–2624——The medical men of the town have brought forward the subject of the burials as injurious to health, 2625, 2626——The burial-ground is crammed full, and the most disgusting scenes are witnessed there; skulls brought up with the hair on, &c., 2627–2635——Complaint made by a man of the name of Targit that his wife's coffin was exposed, 2636, 2637——Letter from the mayor to the Earl of Guildford, rector of St. Mary's, to which the common burial-ground belongs, on the subject of a new burial place, 2638——The part of the town near the burial-ground is low and densely peopled, 2639–2644——There are burials under the catacombs of two churches, 2645——It is witness's decided belief that interment in the town is injurious to the health of the inhabitants, 2647.

[Second Examination.]—The difficulty with regard to arrangements between churchmen and dissenters would arise as regards the consecration of the whole or part of the cemetery, 2649—— Explanation of the difficulties experienced in the vestry meetings of rate-payers, as regards the proposal for a new burial-ground on the common, 2650–2654——The proposed spot was two miles from the town; it would have been better nearer, but the council could get it for nothing, 2655–2657——The council calculated that fees from the rich would enable them to convey the poor at a very inconsiderable expense, 2658.

Deacon, Mr. Letter from Mr. Charles E. Deacon, town-clerk of Southampton, dated 9th April 1842, to the Chairman of the Committee, respecting the state of the churchyard of the parish of St. Mary, in that town, and detailing the measures taken by the corporation for the establishment of a cemetery, *App.* 204, 205.

Dead Bodies. Illness caused in witness's family by having a dead body in the house, *Carr* 670–674——Injurious practice of the poor in keeping bodies too long before they are buried; drunken character of their funerals, *Ib.* 675–682——Evil consequences of keeping bodies long before interment; cases stated, *Walker* 879–886——It would be desirable to have a compulsory law to require the burial of the dead at a stated period after the decease, *Lane* 2325–2327.

The system of keeping dead bodies so long before they are interred could not be dispensed with without interfering with the feelings of the people, *Harker* 1980——It is very injurious to keep bodies long, especially in hot weather; feeling of respect which influences the relations of the deceased to defer the funeral, *James* 2940–2945.

See also *Medical Police. Stepney. Wakes.*

Decomposition of Bodies. Seven years should be allowed for a body to be consumed in a common coffin, *Walker* 803——Time required to decompose bodies buried in different situations, *Ib.* 842——The bodies and coffins in St. Giles's churchyard become entirely decomposed in 14 years, and the ground is then fit for new interments, *Tyler* 1498–1508——Time necessary for the decomposition of a body, *Tagg* 2192.

See also *Depth of Graves,* 1. *Quick Lime,* 1.

Report, 1842—*continued.*

Depth of Graves:

1. *Generally.*
2. *In particular Churchyards and Burial-grounds.*

1. *Generally:*

The London burial-grounds are generally very full, and the coffins from four feet to two feet from the surface, *Carr* 634–638——Even as a matter of economy, coffins should be placed side by side instead of several in one grave, *Walker* 837——It would be to a certain extent advisable to prescribe the depth at which interments should take place, *Copland* 2674, 2675——No body should be interred within six or seven feet of the surface, *Ib.* 2681——If four or five feet of earth is over a coffin there is no reason to apprehend any evil from decomposition, *Bishop of London* 2948.

2. *In particular Churchyards and Burial-grounds:*

Martin's Burial Ground.—The graves in this ground are, as in other grounds in London, dug 30 feet deep, and filled with 16 or 18 coffins and children's coffins in all the openings, *Helsdon* 8. 20, 21——The same plan of interment is common in other burial-grounds, *Ib.* 12–17——Reasons for burying some of the coffins only six inches from the surface, *Walker* 814, 815——Mode of piling up coffins in deep graves till they are full, *Haycock* 962, 963.

Pancras Road Cemetery.—Regulation as to the depth of graves and the quantity of earth above the coffins, *Tyler* 1449–1452.

St. Andrew Undershaft.—There are no coffins nearer the surface of the earth than four feet, *Hawes* 1760, 1761.

St. Ann's (Soho).—Objectionable practice of burying several coffins in a deep grave; such a grave only partially covered at St. Ann's, Soho, *Walker* 836——Plan of digging deep graves at St. Ann's and placing coffins one over another, and only partially covering the graves till full, *Lyons* 1056–1060.

St. Clement's Churchyard (Portugal-street).—Depth of the graves; number of coffins placed therein, *Eyles* 335–339—— Depth of graves and of earth over the upper coffins, *Ib.* 392–394——Shallowest depth at which witness has known a body to be buried in the Portugal-street burying-ground, *Ib.* 1149–1151——A deep grave takes some days to dig, and it is left open at night or only covered with a tarpaulin, *Ib.* 1209, 1210——Rules as to the digging of deep graves; payment per foot, *Pye* 1259–1270——Between each interment the grave is filled up with the shoring boards kept in, *Ib.* 1271–1273.

St. Giles-in-the-Fields.—At St. Giles's-in-the-Fields the ground is very full of bodies, some of which are not more than 18 inches from the surface, *Whittaker* 503–509——The graves are not less than 14 feet deep, and are put as close as possible side by side, *Tyler* 1436–1442——The orders are, that not less than three feet of earth shall be above the uppermost coffin, *Ib.* 1443–1448.

St. John's (Southwark).—Practice in St. John's, Southwark, of digging graves of a certain depth and removing coffins if in the way, and re-interring them, *Abdy* 1342–1354.

St. Leonard's (Shoreditch).—Regulation as to the depth below the surface which the last coffin must be put in the grave; graves are dug as close as possible to one another, *Yarrow* 2024–2027.

St. Martin's-in-the-Fields.—In the burial-ground of St. Martin's-in-the-Fields they scarcely dig graves, but make them with boards, *Munns* 573–578——Graves are sometimes two feet deep more or less, *Ib.* 579–614.

St. Mary's Churchyard (Vinegar-lane.)—The graves are dug deep, and coffins placed one upon another nearly to the surface, *Solomons* 215–217.

Whitechapel.—Of late years the graves have been dug much deeper than formerly; a great many coffins are put into each grave; the ground seldom covers the top coffin more than three feet, *Wallace* 1536–1540——Regulation as to the depth at which bodies should be buried; difficulty of stating the distance between the highest coffin and the surface of the earth, *Champneys* 2868–2871.——*See* also *Dunstan's, St., Stepney.*

Derby. Letter from R. F. Forrester, M. D., to the Chairman of the Committee, dated 30th April 1842, respecting the state of the churchyards of Derby, and the measures taken for the establishment of a cemetery, *App.* 197.

Destruction of Coffins:

Enon Chapel.—Witness believes that the abduction of coffins proceeded to a great extent, and that they were burned in the minister's house, *Pitts* 164–166——There could not have been room for the number of coffins unless many had been destroyed, *Ib.* 200–204——Witness has frequently seen coffins and bodies, old and new, cut to pieces with the spade to make room for fresh comers, *Whittaker* 399–405.

Report, 1842—*continued.*

Destruction of Coffins—continued.

Globe Fields Burial-ground.—Witness has never known coffins to be disturbed in less than 14 years after interment, *Miller* 1650–1652——It has been the regular practice to chop through coffins and bodies when they come in the way, in the Globe Fields ground, *Ib.* 1667, 1668——Evidence respecting the burying of decayed coffins, *Tagg* 2160–2173. 2185, 2186.

St. Andrew Undershaft.—Obstructions found in digging graves, from bodies being buried so thickly; the coffins and bodies are cut through; what is done with them, *Harvey* 1762–1768. 1770. 1772.

St. Ann's (Soho.)—If a body had been buried no more than three weeks, the gravediggers did not mind cutting through it with pickaxes; the half-decayed flesh was left in the ground, and the bones taken to the bone-house, *Copeland* 1383–1385.

St. Clement's Churchyard (Portugal-street.)—The coffins were never improperly broken up, *Eyles* 329–334——Bits of coffins have sometimes come out of the earth, and have been used as fire-wood, *Ib.* 358–362——Witness (formerly gravedigger) has never taken bodies home, nor opened the coffins of children, *Ib.* 379–391——Case observed in which a coffin was taken up in pieces a month after it had been buried, with bones and flesh hanging to it, *Lane* 717——Another case in which a coffin was brought up quite fresh, *Ib.* 717–719——Witness never saw coffins burned, but has heard of their being bought for fire-wood, *Ib.* 721–723——Practice of breaking up coffins to make room for more; description of instrument used; by whom and when done, *Ib.* 749–780.

Constant practice of breaking up the coffins at that churchyard and taking the lead, *Eyles* 1158–1175——The sexton has often obliged men to dig through coffins when they have been reluctant to do so, *Ib.* 1184–1186——Witness saw them chopping the head off his father's coffin, and induced them to desist, *Ib.* 1187, 1188——Fulness of the ground in Portugal-street; coffins are constantly ordered to be cut through to make a grave, *Pye* 1222–1225.

St. Clement Danes.—To witness's knowledge coffins are cut up in the vaults, and the lead removed, and the wood, and bones, or bodies disposed of, *Pye* 1237–1245——The common practice in digging graves is to break through wooden coffins, remove the wood, and place the remains at the bottom of the grave, *Ib.* 1246–1251. 1257, 1258.

Dreadful state of this churchyard; practice with regard to the destruction of coffins and bodies on the occasion of fresh burials, *Chamberlain* 2341–2346. 2349–2365. 2402–2405.

St. Martin's-in-the-Fields.—Witness has seen many pails of water thrown over the coffins before the earth was filled in, to make them rot as soon as possible, *Munns* 591–595——Witness has constantly seen the gravedigger remove coffins for his own use; has seen him smash two or three skulls in digging a grave, *Ib.* 596–604.

St. Mary's Churchyard (Vinegar-lane.)—Witness has seen the gravedigger in the churchyard of St. Mary's take a coffin out of the ground, take out the body and chop the head off, so that he could take it out of the grave, *Solomons* 213——Witness has often seen coffins broken up by the gravedigger, *Ib.* 236–246.

Spa Fields Burial-ground.—At Spa Fields there are very numerous funerals, but coffins are rarely seen when graves are open; the sides of graves are seen boarded with part of coffins broken up, *Carr* 642–653.

Dickson, Mr. Letter from Mr. Peter Dickson, mayor of Southampton, dated 20 April 1842 to the Chairman of the Committee, giving information on the state of the burial-grounds of that town, and the measures taken for the establishment of a cemetery, *App.* 201——Letter, dated 10 April 1842, to the Chairman of the Committee, detailing the measures that have been taken by the town council for the establishment of a cemetery, *Ib.* 204.

Dionis, St., Backchurch.—The churchyard is a very small, confined narrow place indeed; it is getting very full, *Harvey* 1814, 1815.

Disease. The practice of burying in towns is extremely prejudicial, and it is highly probable that it is very often productive of disease, *Fellowes* 1932–1944.

Disinterment of Bodies. (St. Leonard's, Shoreditch.) Complaints from the neighbourhood when the bodies were taken up, the ground excavated, and then buried afresh, *Yarrow* 2014–2017. 2028.

Dissenters. In the event of cemeteries being established, a portion of the ground should be given to the Dissenters, *Baker* 2562, 2563——It would be an objectionable proceeding to set aside a portion of the ground for persons dissenting from the Church, *Robinson* 2832–2837——If a sum were raised by a rate for the purchase of a new cemetery, a portion of the ground should be set apart for Dissenters, *Champneys* 2878–2884. 2889——Assuming that ground were purchased by a rate upon the parish, there would be no objection to leaving a part unconsecrated for Dissenters, *Bishop of London* 2967, 2968.

Report, 1842—*continued.*

Dissenters—continued.

Southampton.—The difficulty with regard to arrangements between Churchmen and Dissenters would arise as regards the consecration of the whole or part of the cemetery, *Deacon* 2649.——*See* also *Church of England Burial-grounds.*

Dressing of Dead Bodies. As far as the means of parties are concerned, they generally incur expense in dressing the body, *Harker* 1974–1977.

Dunstan's, St. (Stepney). There have been more bodies buried in this churchyard than in any other in the kingdom; during the plague, in 1665, there were upwards of 150 buried in a day, *James* 2704——Average number of burials in a year; they have been diminishing gradually since, 1825, *Ib.* 2711——They cannot dig deep, they would come to water; they never put more than two coffins into one grave, *Ib.* 2712–2716——Witness has never been aware of any offensive smell when attending funerals, *Ib.* 2717, 2718——The fees have most seriously diminished in consequence of the cemeteries, *Ib.* 2722——There is a pump in the churchyard; the water is not offensive, *Ib.* 2725–2727——Cemetery established there; fees to be received by the clergy, *Bishop of London* 3002.

E.

Eddison, Edwin. (Analysis of his Evidence.)—Town clerk of Leeds, 782——Crowded state of the parochial burial-grounds in Leeds; investigation into the conduct of the sexton; proposed remedy for the evil; difficulties arising out of the variance on the subject of church rates, 783.

Effluvia:

I. *Generally.*

II. *Whether Injurious to Health:*

1. Generally.
2. In particular Localities.

1. *Generally;*

In some places, especially under chapels, witness has suffered from offensive effluvia, *Carr* 639–641——Offensive effluvia arising from churchyards, *Walker* 798——Distance at which effluvia from a grave may be smelt, and through what depth of ground they will penetrate, *Eyles* 1176–1179——Offensive smell adhering to witness's clothes after working in graves, *Ib.* 1181–1183——Witness has no doubt that every burial-ground in London when opened has an offensive smell, *White* 2061, 2062——The effluvia from a human body are not more injurious than those arising from any other animal, *Atkinson* 2262–2265.

II. *Whether Injurious to Health:*

1. Generally:

Erroneous opinions have been put forward respecting the exhalation of the effluvium from grave-yards furnishing one of the most powerful causes of disease and mortality in the metropolis, *Todd* 2413–2421——The effluvia of putrid bodies are always injurious to human health, and if allowed to escape in large towns, must injure the health of the inhabitants, *Brodie* 2908.

2. In particular Localities:

Clement's-lane Burial-ground.—The smell is very bad in hot weather; buildings by which the ground is surrounded, *Lane* 724–726.

Enon Chapel.—Offensive effluvia whenever the trap-door was opened for letting down coffins; it must have been injurious to the neighbourhood, *Pitts* 172–175——The stench arising from putrid bodies has affected witness's health, *Whittaker* 414–423——The stench drove away the people from Enon Chapel, and it was said the minister got more by the dead than by the living, *Ib.* 499–502.

Globe Fields Burial-ground.—Persons affected with the effluvia from the Globe Fields grounds; there are some coffins within six inches of the surface, *Miller* 1675–1680——Witness has never observed any effluvia or bad smell, *Tagg* 2174, 2175.

Martin's Burial-ground.—Effect of the dreadful smells upon witness's health, *Haycock* 974–980——Immediate effect sometimes produced upon witness by the stench from graves, *Ib.* 986–990.

Portugal-street Burial-ground.—Persons who live near Portugal-street burial-ground complain of the odours arising therefrom in hot or rainy weather, *Ainsworth* 1308.

St. Andrew Undershaft:—Effluvia issuing from the churchyard, *Harvey* 1773–1788. 1793–1796.

St. Ann's

Report, 1842—*continued.*

Effluvia—continued.

II. *Whether Injurious to Health.*—2. In particular Localities—*continued.*

St. Ann's (Soho.)—Quantity of shavings burned in a grave to get rid of the foul air, *Lyons* 1136——There is a smell arising from the churchyard, which leaves a taste as of copper in the mouth, *Copeland* 1386.

St. Martin's (Ludgate-hill.)—The effluvia were most offensive, and must be injurious to health, *Anderton* 1515, 1516——The smell on the Sabbath-day at times at St. Martin's, Ludgate-hill, is awful; they allow them to bury in wooden coffins, *Lynch* 2688, 2689.

St. Mary's Churchyard (Vinegar-yard.)—The smell is sometimes so strong as to oblige witness to close his windows, *Solomons* 218–222.

Whitechapel.—Witness has never experienced, nor has he heard any complaints of any unpleasant effluvia from this churchyard, *Wallace* 1549–1551.

See also *Exhalations. Fevers. Health,* I. *Leaden Coffins. Mary's, St.* (Birmingham.) *Quick-lime,* I.

Egypt. In Egypt bodies do not putrefy so rapidly as in some other countries; it is not dry heat so much as damp that causes putrefaction, *Milman* 2743.

Elim Chapel (Fetter-lane). Circumstances connected with cases of fever attended by witness in the neighbourhood of Elim Chapel, *Collier* 2116–2121.

Enon Chapel (Clement's-lane). Abominable state of that chapel from the interments; insects that infested it; smells arising, &c. *Pitts* 128–131. 199——It is surrounded by houses, except on one side, *Ib.* 163——The minister built the chapel himself as a speculation; it is now shut up, *Ib.* 167–171——The minister had a Sunday school, which attended the chapel for about six hours, *Ib.* 176–182——Witness's wife used frequently to come home ill from chapel, and has not since been a healthy woman, *Ib.* 184——Persons were taken home fainting nearly every Sunday, *Ib.* 205, 206.

The greater part of the earth removed from under Enon Chapel to the Waterloo Road was human bodies in a state of putrefaction, *Burn* 271–273——The burials were very numerous, *Ib.* 274–277——There must have been at least 20 interments a week, *Ib.* 282–284——The place appeared full, and yet the burials continued at the same rate for years afterwards, *Ib.* 285–290—There have been at least 12,000 persons buried there, *Whittaker* 411, 412——Description of the burial-ground belonging to the chapel, *Walker* 799.

Witness (a member of the Committee) was refused admittance at Enon Chapel when he went, as a member of the Committee, to visit the burial-ground there, *Acton* 1285——Witness has observed that the boards of Enon Chapel were very loose from the floor, *Ib.* 1292, 1293——Was stated to be intended to be used for a temperance society, and as a school-room for Roman-catholic children, *Ib.* 1295——The vault of the chapel is immediately connected with a sewer, *Ib.* 1296——From the violence of the keeper of Enon chapel, witness believes a great body of injurious matter to be concealed there, *Ib.* 1300——Witness (another member of the Committee) was refused admittance into the vaults of Enon Chapel, *Ainsworth,* 1306, 1307——Witness (another member) at Enon Chapel was prevented going into the vaults; there was nothing but planking over them; it was near a common sewer, *Fox* 1409, 1410.

See also *Burial Fees. Destruction of Coffins. Effluvia,* II. 2. *Gases,* 2. *Health,* II. 2. *Insects. Mortality. Quick Lime. Sewers. Vaults.*

Evidence. Points of the evidence given by some of the principal witnesses briefly noticed by the Committee in support of their conclusion, *Rep.* iii. iv.

Exhalations. Effect of the exhalations from deep graves with a number of coffins upon a gravedigger in New Bunhill Fields, *Helsdon* 19——Case of a brother-in-law of witness who died after attending a funeral at St. Clement Danes, *Irwin,* 88–93——Instance stated of a nauseous exhalation arising from a new grave, *Ib.* 94, 95——In most London burial-grounds there is scarcely any room; the bodies are near the surface, and exhalations must constantly be mixing with the air, *Whittaker* 510–519——Witness has often an unpleasant taste in the throat after attending funerals, *Carr* 665–669.

The exhalations from the dead must be injurious; they escape from churchyards, and even from leaden coffins in vaults, *Walker* 792–796——The working clergy are so careful not to breathe the air of graves, that the sexton is ordered to place the box at some distance, *Ib.* 815——A barrister told witness lately that he had been affected several days after attending a funeral in the Waterloo Road; it is an improper place, owing to the humidity of the soil, *Ib.* 833, 834——Cases in which persons attending funerals have suffered from exhalations, *Haycock* 981–985——The foul air exhaled from the dead is generally so diluted and scattered by the wind, as to produce no specific disease, but only a general ill effect on those predisposed, *Copland* 2663——Epidemics following the plague of London in 1660, caused, first, by the exhalation from the 100,000 bodies then buried, and secondly, by the bad water; different form of disease arising from these causes, *Ib.* 2667——Witness has always advised persons labouring under any disease, if living near a churchyard, to move into the country, as emanations from the dead depress the powers of life, *Ib.* 2667.

See also *Andrew's, St.* (Holborn.) *Effluvia. Grave-diggers. Typhoid Fever.*

Report, 1842—*continued.*

Expense of Burials. The additional expenses of interments out of town will bear an insignificant proportion to the benefit thereof, *Rep.* v.——Suggestions as to the relief of the expense of burials to poor persons; they do not like to accept gratuitous burial, *Baldock* 1916–1919. 1923, 1924. 1926–1930——By a well-regulated scheme, the funerals of the poor might be conveyed to a distance of three or four miles from London without any increased expense, *Milman* 2774.——*See* also *Cemeteries*, 2, 3.

Eyles, John. (Analysis of his Evidence.)—Was gravedigger for a year at St. Clement's churchyard, in Portugal-street, 323–328——The coffins were never improperly broken up, 329–334——Depths of the graves; number of coffins placed therein, 335–339——Size of the ground; number of burials per week; fees, &c. 340–347——Was sometimes unwell while employed there, and is not quite well now, 348–351——Is fond of spirits, and so are the present gravediggers, 352–357——Bits of coffins have sometimes come out of the earth and have been used as fire-wood, 358–362——The bones are thrown up at the same time, and taken to the bone-house, 363–370——At one time quantities of bones were removed there, and will not be disturbed for centuries, 371–378——Has never taken bodies home nor opened the coffins of children, 379–391——Depth of graves and of earth over the upper coffins, 392–394.

[Second Examination.]—Desires not to be examined until assured that his family would not be injured, 1138–1148——Shallowest depth at which witness has known a body to be buried in the Portugal-street burying-ground, 1149–1151——Case in which witness felt the effects of gas at the bottom of a grave in St. Clement Danes, 1152–1157——Constant practice of breaking up the coffins in that churchyard, and taking the lead, 1158–1175——Distance at which effluvia from a grave may be smelt, and through what depth of ground they may penetrate, 1176–1179——The gas escapes from the vaults into the church through a grating cullett, and many persons who go to church there are taken ill and die, 1180——Offensive smell adhering to witness's clothes after working in graves, 1181–1183.

The sexton has often obliged men to dig through coffins when they have been reluctant to do so, 1184–1186——Witness saw them chopping the head off his father's coffin, and induced them to desist, 1187, 1188——Circumstances attending the burial of persons named Clark and Beasley, 1189–1190——Removal of earth lately from St. Clement Danes churchyard; where shot, 1191–1195——The sexton orders persons to dig a grave in a particular place and then leaves them, 1196–1199——Filthy state of the pauper ground of St. Clement Danes, close to the almshouses; steam arising from it, 1200–1206——In Portugal-street burial-ground has also seen the steam issuing from the earth, 1207, 1208——A deep grave takes some days to dig, and it is left open at night, or only covered with a tarpaulin, 1209, 1210——Persons could not object to the use of quick lime; in dry ground it would be of great use, but not in wet ground, 1216–1218.

F.

Farran, Dr. Letter from C. Farran, M. D., dated 30 April 1842, to the Chairman of the Committee, stating his views on the subject of "interments within the precincts of towns," *App.* 208.

Fellowes, Sir *James.* (Analysis of his Evidence.)—Physician to the army; was sent out to Gibraltar at the time of the pestilential fever there in 1804; was afterwards employed as inspector-general of the military hospitals during the whole siege of Cadiz, 1931——Determination of the Government at the time of the pestilential fever that all persons should be buried out of the towns instead of in the churches; they have still adhered to this practice, 1932——The practice of burying in towns is extremely prejudicial, and it is highly probable that it is productive very often of disease, 1932–1944——How the expense was supplied when the alteration in the mode of burial was made to prevent the pestilential fevers in Spain, 1935.

[Second Examination.]—Explanation of former evidence, 2613——It would not be necessary to apply lime, provided the bodies were buried ouside the town, 2614.

Fees. Resolutions of the Committee as to the payment of fees to the clergy on account of burials in cemeteries, *Rep.* vii.——Classes of fees received by the clergy, *Milman* 2787–2789.——*See* also *Burial Fees. Clergy*, 2. *Complimentary Fees. Highgate Cemetery. Tower Hamlets Cemetery.*

Fevers. The effluvium given off from the dead human body may be considered as one cause, *inter alias,* of fevers; it is likely to produce fevers of the low typhoid kind, *Collier* 2096–2106. 2113, 2114. 2122——Witness considers the crowded state of the churchyards as one cause of fever and disease; the dense population in courts and alleys another, and want of sewerage another, *Brodie* 2918–2921——Character of fever arising from decayed vegetable matter, and from vegetable and animal matter together, *Copland* 2672.

The miasma rising up in the atmosphere of this town is likely to generate low fevers, *Lane* 2304–2312. 2335–2337. 2340——Remarkable case that occurred in witness's practice, two years since, of a gentleman who died of malignant fever, caused by inhaling noxious

Report, 1842—*continued.*

Fevers—continued.

noxious air from the vault of a chapel; death of his wife from infection, *Copland* 2662. 2664–2666——In a hospital his disease would have propagated itself to others predisposed, if the apartments were not properly ventilated, *Ib.* 2663.

The gases emanating from human bodies are likely to be injurious to the general health, but not to produce any particular fever, *Todd* 2422–2425.

See also *Elim Chapel. Leeds. Typhoid Fever. Typhus Fever.*

Fisher, Mr. Letter from George Fisher, Mayor of Cambridge, dated 23 April 1842, to the Chairman of the Committee, respecting the state of the burial-grounds of that town, and their effects upon its general health; and also the measures taken for the establishment of a cemetery, and inclosing tables, *App.* 200.

Fitch, Mr. Anger of Mr. Fitch, the sexton, when a man of the name of Irving examined Portugal-street churchyard and probed the ground, *Pye* 1232–1234.

Fitzpatrick, Dr. Letter from Thomas Fitzpatrick, M.D. of Dublin, dated 25 April 1842, to the Chairman of the Committee, detailing circumstances demonstrative of the abominations consequent on the frequent re-opening of graves, *App.* 198, 199.

Flemish Burial-ground. Negotiations between the parishes of St. John and St. Olave, Southwark, and the Greenwich Railway Company, as to the providing of a burial-ground in lieu of the Flemish burial-ground taken for the purposes of the railway, *Abdy* 1355–1368.

Ford, William. (Analysis of his Evidence.)—Beadle of the parish of St. Martin's, Ludgate, 1704——The dead are buried all in vaults; there is no burying-ground; size of the vaults; number of bodies they contain, 1705–1709——Effluvia arising from them in damp or warm weather, 1710. 1718–1720——Practice of clearing a vault from its contents in order to place other bodies in it, 1711–1717. 1723——One or two of the vaults are very dry; there are flues like chimnies in the vaults, 1721——Interments in wood are allowed, 1724, 1725——Remark made by the Bishop of London on the interments in the church of late; they still continue to bury there since that remark, 1726–1731. 1739–1742——The congregation have never complained of any effluvia from the vaults, 1732——Name of the clergyman performing the duty, 1733——Precautions taken by the clerk with respect to some of his relations buried in the vaults, 1734–1736——Leaden coffins are a protection to persons entering the vault; if they be properly soldered no effluvia can escape, 1743–1745.

Foreign Countries. Singularity of our tolerating an abuse which has been corrected for years by nearly all other civilized nations, *Rep.* iv.——*See* also *Cemeteries*, 5.

Forrester, Dr. Letter from R. F. Forrester, M. D. to the Chairman of the Committee, dated 30 April 1842, respecting the state of the churchyards of Derby, and the measures taken for the establishment of a cemetery adjacent to the town, *App.* 197.

" *Fosses Communes.*" The plan of " Fosses Communes" for the interment of the poor at Paris, recommended, *Walker* 832.

Fox, Colonel, M. P. (Analysis of his Evidence.)—Places recently visited by him, 1404–1405——Confirms the evidence taken by the Committee, 1406, 1407——The basement stories of several houses adjoining different churchyards are far below the surface of the earth in which innumerable bodies are placed, 1408——At Enon Chapel was prevented from going into the vaults; there was nothing but planking over them; it was near a common sewer, 1409, 1410——The gravediggers in Portugal-street left off working when witness was preparing to observe them, 1411——Remarked holes made by the searchers, which must let out foul air, *Ib.*

Fox, Mr. Fox, the gravedigger at St. Ann's, Soho, used to pull out the nails and handles of the coffins and sell them, *Copeland* 1378–1382.

Frankfort. Possibility of making cemeteries an agreeable promenade, as at Frankfort, *Bishop of London*, 2973.

Fraudulent Burials. (Bishopsgate). Comparison of the number of deaths registered in the parish of Bishopsgate, and the number buried at the parish churchyard; one-third are unaccounted for; probable causes of this fact, *Russell* 2444–2454. 2473–2476——Whether several of the parishioners who have died may not have been buried in Globe Fields, or elsewhere, on account of the lower fees, *Ib.* 2458–2463——Possibility of their having been buried fraudulently, to avoid fees, *Ib.* 2464–2468——Witness has never had reason to suppose that people have sometimes not been buried at all, *Bishop of London* 3027.

Report, 1842—*continued.*

G.

Ganges, The. The water of the Ganges and Hooghly, contaminated by dead bodies, has produced dysentery and putrid fever, *Copland* 2670.

Garland, John. (Analysis of his Evidence.)—One of the churchwardens of the parish of Leeds, 2901——Confirms Mr. Baker's evidence in all points except one, the demand for a 1*s.* rate; witness's explanation of it, 2901–2907.

Gases:

1. *Their escape from Graves, and injurious Effects generally.*
2. *In particular Churchyards and Burial-grounds.*

1. *Their escape from Graves, and injurious Effects generally.*

Effects of the escape of gas from a leaden coffin upon witness when engaged by Mr. Walker, a medical man, in collecting it, *Whittaker* 428–442——The gas must escape from leaden coffins; if there is no vent it will burst them; grave-diggers have sometimes burned it, *Ib.* 447–457——Virulent effect of the gas emanating from coffins; that emanating from leaden coffins is more injurious than that from wooden ones, *Atkinson* 2253–2261. 2266.

All the London burial-grounds are full, and noxious gases must escape, *Whittaker* 560–562——Reasons for concluding that animal matter is mixed up with the gases produced by dead bodies, *Walker* 816–818——The gases produced by churchyards are a very exciting cause of consumption in this country, *Ib.* 894——All gravediggers have been more or less affected by the gases produced by churchyards, *Ib.* 895——With the present mode of interment noxious gases must escape; if the dead were buried 30 feet deep, perhaps they might be neutralized, and at all events would be greatly diluted, *Brodie* 2914–2916——The gas emanating from a human body is more injurious than that of an animal, *Lane* 2319–2324.

2. *In particular Churchyards and Burial-grounds:*

Enon Chapel.—Enon Chapel is surrounded by houses, and the gas must get into them, *Whittaker* 443–446.

Martin's Burial-ground.—Coffins are sometimes less than two feet from the surface; the gases would certainly come through, *Whittaker* 495–498.

Portugal-street Burial-ground.—Witness has seen a steam issuing from the earth in the Portugal-street burial-ground, *Eyles* 1207, 1208——Witness, when he visited Portugal-street burial-ground, as a Member of the Committee, saw a hole in the ground, which one of the gravediggers said was to let the gaseous matter escape, *Ainsworth* 1308, 1309.

St. Ann's (Soho).—Mode of burning out the foul air; rapid accumulation thereof in graves, *Lyons* 1066–1069——Steam described as issuing from the deep graves as from dunghills; great heat of them even in cold weather, *Ib.* 1129–1135.

St. Clement Danes.—Case in which witness felt the effects of gas at the bottom of a grave in St. Clement Danes, *Eyles* 1152–1157——The gas escapes from the vaults into the church through a grating cullett, and many who go to church there are taken ill and die, *Ib.* 1180.

See also *Aldgate Churchyard. Consumption. Effluvia. Exhalations. Fevers. Leaden Coffins. Prout,* Dr. *Strand,* The. *Water,* 1.

George's, St. (Bloomsbury). Amount of burial fees in 1838, 1839, and 1840, *Bishop of London* 2949.

George's, St. (Hanover-square). Amount of burial fees in 1838, 1839, and 1840, *Bishop of London* 2949.

George's, St. (Southwark). Number of interments in the vaults in the course of the year; charge, *Houghton* 1592–1595——Average number of interments in the churchyard in the course of the year, *Ib.* 1596, 1597. 1600–1606——Information with reference to the vaults under the church; witness has never perceived any unpleasant effluvia to arise from what has been interred there; the vault is well ventilated, *Ib.* 1567–1573. 1591——The churchyard has been lately much increased in size; way in which it has been enlarged; number of years the new churchyard has been made; present size of the burial-ground, *Ib.* 1575–1586.

George's, St., Hospital. See *King's College Hospital. Lock Burial-ground.*

Gibraltar. Determination of the Government at Gibraltar, at the time of the pestilential fever there in 1804, that all persons should be buried out of the town, instead of in the churches; they have still adhered to this practice, *Fellowes* 1932.

Report, 1842—*continued.*

Giles's, St. in-the-Fields. At St. Giles's-in-the-Fields they are obliged to remove the dead; it is said they are put into pits with quick lime, *Whittaker* 520–527——The parish has two grave-yards, the one at the church, the other a cemetery in Pancras Road, between King's Cross and Kentish Town, *Tyler* 1415——State of each described; number buried in 1841, *Ib.* 1415–1418——They continue to bury in London, because they have no right to refuse, and the churchyard has been shut up for 20 years; there is no objection, either on the ground of health or of decency, *Ib.* 1419——Size of the churchyard *Ib.* 1432–1434——Manner in which the ground became raised above the street, *Ib.* 1478——Amount of burial fees in 1838, 1839, and 1840, *Bishop of London* 2949.

The Roman-catholic Irish prefer it to the cemetery, as it was consecrated by a Roman-catholic bishop; course pursued during the cholera, *Tyler* 1419, 1420.

Falsehood of a statement made in a Sunday newspaper concerning the alleged bad state of St. Giles's churchyard, *Tyler* 1463.

A portion of the churchyard has not been disturbed for nearly forty years, *Tyler* 1435——Cases of St. Giles's-in-the-Fields and St. James, Westminster, in which local Acts were prepared to enable the parish to raise money for the purchase of a burial-ground, *Bishop of London* 2970——In St. Giles's the fees have kept up, as a new burial-ground was purchased 40 years ago, *Ib.* 3030.

See also *Burial Fees. Cemeteries*, 4. *Decomposition of Bodies. Depth of Graves*, 2. *Vaults.*

Globe Fields Burial-ground (Mile End). The burial-ground in Globe Fields is a private burying-ground, belonging to Mr. Thomas Tagg; where situate, *Miller* 1615–1619——Number of pits dug in it for the depositing of bodies previously interred, to make room for others to go into the graves, *Ib.* 1620–1637——Size of the ground; number of bodies which have been buried there since the year 1820, *Ib.* 1638–1640——Size of the ground; depth to which a grave is dug without finding water; space of ground unoccupied; it is freehold, *Tagg* 2143–2145. 2147, 2148. 2150——Fees charged at this ground, *Miller* 1681; *Tagg* 2159. 2187.

Circumstances connected with a theft of bones, nails, and plates off the coffins, in October 1839, *Miller* 1641–1649—By whom the burial service is performed, and how, *Ib.* 1653–1657——When witness has been digging a new grave, what he calls bloody corruption used to run down from the old grave near it, *Ib.* 1691–4–1697——Case of a cow dying in a few hours from eating the grass which had been cut from Globe Fields, *Ib.* 1703.

Falsehood of the evidence given by William Miller respecting this burial-ground, *Tagg* 2123–2138. 2146——The ground is not consecrated; it is not attached to any chapel, *Ib.* 2139, 2140. 2151——Plan of burial, by which 9,500 bodies have been buried in a space less than half of three-fourths of an acre, *Ib.* 2149–2158——Persons of all religious denominations are interred in this ground, *Ib.* 2176–2181——A great many persons who have been dissected have been interred there, *Ib.* 2182–2184.

A petition has been presented to the House of Commons from the common council, complaining of burial in witness's ground, *Tagg* 2188–2191.

The ground is surrounded by a wall; persons can see what is going on in the ground; the front iron-work is open, and the gates are standing open all day long, *Tagg* 2192–2195——Circumstances connected with a disgusting scene witnessed by a person from the Eastern Counties Railway in the burial-ground belonging to Thomas Tagg in Globe Fields, Mile End, *Parker* 2202–2217; *Shaw* 2220–2228.

See also *Destruction of Coffins. Effluvia*, II. 2.

Gloucester. Letter from Mr. W. Morgan Meyler, dated 18 April 1842, to the Chairman of the Committee, giving information respecting the state of the burial-grounds of the city of Gloucester, and their effects upon the general health of the town, and suggesting a remedy for the evil, *App.* 203.

GRAVEDIGGERS:

1. *Generally.*
2. *Effect of their Employment upon their Health.*
3. *Their addiction to Spirits.*

1. *Generally:*

Unseemly and demoralising practices exposed by their evidence, adverted to, *Rep.* iii.——It had certainly been the practice at St. Ann's, Soho, before witness's time, for the gravediggers to strip the lead from the coffins, *Lyons* 1086–1096.

2. *Effect of their Employment upon their Health:*

Witness was sometimes unwell while employed in St. Clement Danes churchyard, Portugal-street, as gravedigger, and is not quite well now, *Eyles* 348–351——Witness, for 24 years, was at St. Martin's-in-the-Fields; during that time he removed the whole of the bodies, with help, to the catacombs and elsewhere; his health was affected by the work; his sensations and remedies, *Lyons* 1048–1055——Witness's (grave-digger at St. Ann's,

Report, 1842—*continued.*

GRAVEDIGGERS—continued.

2. *Effect of their Employment upon their Health*—continued.

Ann's, Soho) pay; state of health, &c. *Ib.* 1100–1107——Instances in which witness's (grave-digger at St. Clement Danes) health has been affected, *Pye* 1235.

Case of a gravedigger in St. George's churchyard who died in consequence of some earth touching a cut finger while digging a grave, *Haycock* 1041–1045——Grave-digging is a very unhealthy employment; witness has been in much better health since he left it, *Pye* 1274–1281——Unhealthiness of the occupation of grave-digging illustrated by witness's experience, *Copeland* 1371–1376. 1402——Witness's health has been much better since he left off grave-digging, *Ib.* 1394–1397——Witness has been affected in his health from this work, *Miller* 1669–1672——Illness of witness from his employment as gravedigger, *Chamberlain* 2347, 2348. 2366–2380. 2385–2391——His wife is afflicted with the same complaint; the doctors term the complaint catching, *Ib.* 2392.

3. *Their addiction to Spirits;*

Addiction of gravediggers to drink on account of the effluvia; their wages, *Helsdon* 23–25——Witness (formerly grave-digger) is fond of spirits; so are the present gravediggers, *Eyles* 352–357——Gravediggers require a little extra drink, *Munns* 584, 585——All gravediggers are drinking men; the old ones take care not to be injured; they let others do the work, *Walker* 802——Gravediggers usually drink; they could not live so long as they do if they did not, *Haycock* 997–1003.

Witness (gravedigger at St. Clement Danes) has been obliged to drink spirits, *Pye* 1235, 1236——Witness could not perform grave-digging without the use of spirits, *Miller* 1665, 1666. 1685——To enable gravediggers to continue their work they must have recourse to spirits, *Lane* 2328–2334. 2339——Witness has been driven to drinking by his employment, *Chamberlain* 2381–2384.

See also *Gases*, 1.

Greenwich Railway Company. Negotiations between them and the parish of St. John and St. Olave, Southwark, respecting the Flemish burial-ground, *Abdy* 1355–1368.

Guilford, Earl of. Letter from the mayor to the Earl of Guilford, rector of St. Mary, Southampton, to which the common burial-ground belongs, on the subject of a new burial-place, *Deacon* 2638.

Gutteridge, Mr. Letter from Mr. Thomas Gutteridge, dated 6 May 1842, to the Chairman of the Committee, offering to obtain information relative to the burying-grounds of Birmingham, *App.* 207.

H.

Hackney-road Burial-ground. See *Leonard's, St.* (Shoreditch).

Harker, Daniel Richard. (Analysis of his Evidence.)—Parish clerk of St. Stephen's, Coleman-street, 1946——Statement as to the accommodation for burials, and the mode in which the vaults have been cleared, 1947——A great many bodies have been buried in the common vault since witness has been there; there are no unpleasant effluvia from the vault; it is a large vault and ventilated, 1947–1950. 1952——Number of burials in the parish annually, 1951——The churchyard is only on the north side of the church, 1953——Way in which the parish clerks derive their incomes, and how they are appointed, 1954–1962——Objection of the population of the parish to quick lime being placed in the coffins; they would object as much now as at any former time to its insertion, 1963–1973——As far as the means of parties are concerned, they generally incur expense in dressing the body, 1974–1977.

Evidence as to the expense of coffins, 1978, 1979——The system of keeping bodies so long before they are interred could not be dispensed with, without interfering with the feelings of the people, 1980——Additional expense of the funeral of a person of the lower class, supposing the burial-ground at a distance of two or three miles, 1981–1992——Carriage invented by Mr. Shillibeer to take a corpse and mourners to the burial-ground, 1993.

Harvey, Joseph. (Analysis of his Evidence.)—General builder; parish clerk of St. Andrew Undershaft, 1746–1748——Size of the churchyard; it is inclosed from the street; it is about two feet higher than the level of the pavement; cause of this, 1749–1754——Distance between the churchyard and the adjoining houses, 1755, 1756——Number of burials on an average in the course of the year, 1757–1759——There are no coffins nearer the surface of the earth than four feet, 1760, 1761——Obstruction found in digging graves from bodies being buried so thickly; the coffins and bodies are cut through; what is done with them, 1762–1768. 1770–1772——The churchyard may be buried in for 10 or a dozen years to come, considering the population, 1769——Effluvia issuing from the churchyard, 1773–1788. 1793–1796——There is one vault in the

Report, 1842—*continued.*

Harvey, Joseph. (Analysis of his Evidence)—*continued.*

the church, the entrance to which is outside; there is an air-pipe to afford ventilation; it has been closed, with one exception, upwards of 20 years; it is full, 1789. 1792. 1797, 1798——Bones are found in the cellars of houses near Leadenhall-street; in St. Mary Axe, there is in one of the cellars a place full of bones, 1799–1801——There is no offensive smell when the windows of the school-house are open in hot weather, 1802——The poor are healthy in the neighbourhood; they suffered much in the time of the cholera, 1803, 1804——Some of the churchyards in the City are far better than others; some are not as they ought to be; state of several of them described, 1805–1831.

Haviland, Dr. Letter from John Haviland, M.D. dated 27 April 1842, to the Chairman of the Committee, respecting the situation and state of the churchyards of the town of Cambridge, and their effects upon the health of the inhabitants, *App.* 198.

Hawkes, Mr. Letter from Mr. H. Hawkes, mayor of Coventry, dated 15 April 1842, to the Chairman of the Committee, giving information respecting the state of the burial-grounds of that town, and suggesting a remedy, *App.* 203.

Haycock, Valentine. (Analysis of his Evidence.)—Gravedigger at the New Bunhill Fields burial-ground, called Martin's burial-ground, 943–947——Number of bodies interred in the last 10 years, and previously; size of the ground, 948–961——Mode of piling up the coffins in deep graves till they are full, 962, 963——Effect of the dreadful smells upon witness's health, 967–973——His family suffered in health until they removed to a distance; people are always leaving the neighbourhood, 974–980——Cases in which persons attending funerals have suffered from exhalations, 981–985——Immediate effect sometimes produced upon witness by the stench from graves, 986–990——The grounds of St. Mary (Newington), and Bermondsey Old Church, are worse than Martin's burial-ground; witness has been there as bearer, 991–996.

Gravediggers usually drink; they could not live so long as they do if they did not drink, 997–1003——Name of the minister of Martin's ground; burial fees, &c., 1004–1016——The ground has risen six inches in ten years, 1017, 1018——Mr. Hoole died soon after having assisted in removing remains from the vaults, 1019–1025——Account of witness's pay and perquisites; he is about to give up his situation, on account of his health, 1026–1040——Case of a gravedigger in St. George's churchyard who died in consequence of some earth touching a cut finger while digging a grave, 1041–1045.

Health of Large Towns:

I. *Generally.*

II. *In the Neighbourhood of particular Churchyards and Burial-grounds:*

1. Clement's-lane Burial-ground.
2. Enon Chapel.
3. Martin's Burial-ground (New Bunhill Fields).
4. Portugal-street Burial-ground.
5. St. Andrew Undershaft (St. Mary Axe).
6. Southampton.
7. Spa Fields.

I. *Generally:*

After patient investigation the Committee cannot arrive at any other conclusion than that the injury arising to the health of the community from interments in large towns is fully proved, *Rep.* iii.——Witness has seen enough to convince him that the general evidence concerning the injury done to the health of the inhabitants by grave-yards is perfectly borne out, *Acton* 1288, 1289. 1294–1297.

Names of burial-places personally examined by witness, *Walker* 806——Persons living near all these must be affected in their health, *Ib.* 807–811——Examination as to the mode in which the health of persons near churchyards may be affected, and evidence to show that it actually is affected, *Ib.* 822–830——Witness is decidedly of opinion that it is injurious to the health of inhabitants of large towns that burials should take place within them, *Hewson* 1898——Complaints made of the effluvium and bad effects from the churchyards by persons residing near them, *Anderton* 2234——Circumstances that influence the health of the inhabitants of large towns, *Copland* 2659.

Witness is not aware of any nuisance having arisen, or any noxious effects having been produced upon the health of the population in the vicinity of the burial-grounds, *Robinson* 2809.

II. *In the Neighbourhood of particular Churchyards and Burial-grounds:*

1. Clement's-lane Burial-ground:

Ill-health of witness and his family, and sickness in the neighbourhood; there is no free passage of air, *Lane* 727–735. 753, 754.

Report, 1842—*continued.*

Health of Large Towns—continued.

II. *In the Neighbourhood of particular Churchyards and Burial-grounds*—continued.

2. Enon Chapel:

Witness has been of opinion for years that burying the dead at Enon Chapel, and in Wild-street, is injurious to the health of the neighbourhood, *Burn* 314, 315.

3. Martin's Burial-ground (New Bunhill Fields):

Witness's family suffered in health until they removed to a distance; people are always leaving the neighbourhood, *Haycock* 974–980.

4. Portugal-street Burial-ground:

The houses overlooking the churchyard must be very unhealthy, *Ainsworth* 1314.

5. St. Andrew Undershaft (St. Mary Axe):

Effect upon witness's health from living near the churchyard; to save his life, he was obliged to leave town, and take a small living; nature of his sickness, *Knapp* 908–911. 914, 915——The poor are healthy in the neighbourhood; they suffered much in the time of the cholera, *Harvey* 1803, 1804.

6. Southampton:

The medical men of the town of Southampton have brought forward the subject of the burials as injurious to health, *Deacon* 2625, 2626.

7. Spa Fields:

The burial-ground is surrounded by houses, but witness would not think the health of the people affected, *Carr* 656–659.

See also *Botolph, St.* (Bishopsgate.) *Cemeteries*, 2. 3. 4. *Clement's-lane Burial-ground. Quick-lime*, 2.

Helen's, St. (Bishopsgate.) This churchyard is in a better state than most in the City; it is taken a great deal of care of, *Hawes* 1817–1819.

Helsdon, Henry. (Analysis of his Evidence.)—Collecting clerk of J. H. Cooper, iron-founder, Drury-lane, and assistant dissenting minister at a burial-ground in Golden-lane, Barbican, 4–7——The graves, as in other grounds in London, are dug 30 feet deep, and filled with 16 or 18 coffins, and children's coffins in all the openings, 8. 20, 21——Once, in 1837, witness buried 21 persons on a Sunday afternoon in Holywell Mount ground, 9–11——The same plan of interment is common in other burial-grounds, 12–17——Offensive effluvia and swarms of black flies and insects generated by this mass of corruption, 18–22——Effect of the exhalations upon a gravedigger in New Bunhill Fields, 19——Addiction of gravediggers to drink on account of the effluvia; their wages, 23–25——Intermittent fever prevails much near the ground, but it may arise from the filthy state of the neighbourhood, 26–31——The system of burial affects the morals of the people, 32, 33——One of the worst burial-grounds in London is that of St. Martin's-in-the-Fields, in Drury-lane; immense number of burials; mode of raking over the graves, 34–43——All the neighbourhood complain of the ground as a serious nuisance, 44–46——Number of burials weekly, 49——The same evils prevail in all burial-grounds; monopoly of individuals irresponsible to any authority, 51–53——Mode in which witness discharges his duties, 55–62.

Hewson, Rev. *Frank.* (Analysis of his Evidence.)—Crowded state of the burial-ground in the parish of St. Mary's, Birmingham; it is situated in the heart of the town; the smell and effluvia are most abominable and disgusting, 1871–1873. 1891–1893——In digging fresh graves, they frequently turn up bones and pieces of human flesh, 1874, 1875——Complaints made by persons of their friends' coffins being disturbed, 1876–1879——There are not many vaults, 1881——The inducement to bury here is that the fees are lower than the other churchyards, 1882——Size of the churchyard; number buried there in a year; length of time it has been open; the ground has been very much raised, 1883–1888. 1901–1905——Name of the rector of St. Mary's; by whom the fees are received, 1889, 1890——Objection of the lower orders to the use of quick-lime to hasten decomposition, 1895, 1896.

Witness is decidedly of opinion that it is injurious to the health of inhabitants of large towns that burials should take place within them, 1898——Crowded state of the churchyard of Norwood, in Middlesex, of which witness is incumbent; they can scarcely find room to bury a fresh corpse, 1879. 1898——The expense to a populous parish of obtaining a burial-ground out of its precincts, and conveying the bodies of the poor, would be very trifling, 1899——Difficulty of making a sufficient compensation to incumbents for the loss of fees, 1900——It is generally felt as a nuisance to have over-crowded burying-grounds in country places; witness cannot tell why Christian churches should be considered proper places for burials, 1901——The Jews always buried without the cities, *Ib.*

Highgate Cemetery. The Highgate Cemetery is well situated, *Walker* 869——A small fee was secured to the clergy by the Highgate Cemetery Act, but they are losers, *Bishop of London,* 2948.

Holywell Mount Ground. Once, in 1837, witness buried twenty-one persons on a Sunday afternoon in Holywell Mount ground, *Helsdon* 9–11.

Hooghly, The. See *Ganges,* The.

Hook, Rev. *W. T.* Letter from Rev. W. T. Hook, vicar of Leeds, dated 19 April 1842, to the Chairman of the Committee, with suggestions for the establishment of a cemetery in that town, *App.* 201, 202.

Hoole & Martin, Messrs. Description of a grave-yard in the New Kent Road belonging to Messrs. Hoole & Martin, *Whittaker* 458–475——It is a speculation of their own; they appoint a dissenting minister to bury the dead, *Ib.* 476–494——Their burial-ground is surrounded by houses, *Ib.* 550–553——Mr. Hoole died soon after having assisted in removing remains from the vaults in his burial-grounds, *Haycock* 1019–1025.

Houghton, Rev. *John.* (Analysis of his Evidence.)—Rector of St. George's, Southwark, 1566——Information with reference to the vaults under the church; witness has never perceived any unpleasant effluvia to arise from what has been interred there; the vault is well ventilated, 1567–1573. 1591——No bodies are allowed to be interred there without lead, 1574. 1589, 1590——The churchyard has been lately much increased in size; way in which it has been enlarged; number of years the new churchyard has been made; present size of the burial-ground, 1575–1586——If an Act of Parliament were passed prohibiting the burial of the dead within the precincts of the metropolis, a rate of a penny in the pound would not be sufficient to remunerate the clergy for any loss of dues, 1587, 1588——Number of interments in the vaults in the course of the year; charge, 1592–1595——Average number of interments in the churchyard in the course of the year, 1596, 1597. 1600–1606——The Lock burial-ground in the Dover Road is under witness's control; the ground was left to the parish, 1598, 1599——Bad state of this ground formerly; improvement in it; size; number of bodies buried there, 1607–1614.

I.

Innocent, Mr. Letter from Mr. John Innocent, bookseller, of Sheffield, dated 31st March 1842, to the Chairman of the Committee, offering to obtain information respecting the system of burial in towns, *App.* 205—— Letter from Mr. J. Innocent, Mayor of Sheffield, dated 6th May 1842, to the Chairman of the Committee, enclosing information relative to the state of the parochial burial-grounds of that town, *Ib.* 207, 208.

Insects. Insects that infested Enon Chapel, Clement's-lane; they were supposed to have arisen from putrefaction; they were similar to bugs, with wings, *Pitts* 161, 162—— Witness has observed a long thin fly coming out of the burial-ground in Clement's-lane, *Lane,* 738–740. 749–752——Witness has seen nasty great black things, as big as his finger, crawling about in various churchyards; when the sheep are grazing they pick them up and chew them as well as the grass, *Miller* 1664. 1698–1702——Insects which generate in churchyards described, *Dr. Lynch* 2698–2700.

See also *Paul's, St.* (Leeds).

Intermittent Fever. Intermittent fever prevails most near the burial-ground in Golden-lane, Barbican, but it may arise from the filthy state of the neighbourhood, *Helsdon* 26–31.

Irwin, John. (Analysis of his Evidence.)—House-painter, living in Clement's-lane; works chiefly out of doors, 63–67——His house overlooks the burial-ground of St. Clement Danes; bad health of himself, family, and lodgers, since he has lived there, 68–84—— Before he had been there six weeks a child was attacked with typhus fever and died; Mr. Carpenter, who attended him, said it arose from their vicinity to the churchyard, 85–87—— Case of a brother-in-law of witness, who died after attending a funeral, 88–93——Instance stated of a nauseous exhalation arising from a new grave, 94, 95—— Scene witnessed at St. Sepulchre's in clearing out a vault; removal of bones, &c. to the bone-house, 97–100——The health of witness's family cannot have been injured by keeping paints in the house; their good health before they lived in their present situation, 101–110——Statement as to the numerous deaths near Clare-market, and the assumed causes, 111–116——Bad drainage of Clare-market and the streets adjacent, 117–122.

[Second Examination.] There is another burial-ground at the bottom of Clement's-lane, belonging to St. Clement Danes, 321, 322.

Report, 1842—*continued.*

J.

James, Rev. *Evan.* (Analysis of his Evidence.)—Curate of St. Dunstan's, Stepney, 2701——There have been more dead bodies buried in that churchyard than in any other in the kingdom; during the plague, in 1665, there were upwards of 150 buried in a day, 2704——There have been several private cemeteries established lately, 2706——Average number of burials in a year now; they have been diminishing gradually since 1825; 2711——They cannot dig deep, they would come to water; they never put more than two coffins into one grave, 2712–2716——Witness has never been aware of any offensive smell when attending funerals, 2717, 2718——The fees have most seriously diminished in consequence of the cemeteries, 2722——Speaking generally with regard to London, witness is decidedly of opinion that large cemeteries on each of the four sides of London would be a great advantage, 2723, 2724——There is a pump in the churchyard; the water is not offensive, 2725–2727.

[Second Examination.]—Dreadful scene in Stepney church, in consequence of keeping a body too long before burial, 2939——It is very injurious to keep bodies long, especially in hot weather; feeling of respect which influences the relatives of the deceased to defer the funeral, 2940–2945——Has ascertained that he has been drinking for years the water from the pump in Stepney churchyard, and that three medical men always drink it, and say it is the best in the neighbourhood, 2945, 2946.

James, St. (Colchester). Letter from Charles Edward Blair, M. D., churchwarden of St. James, dated 4th May 1842, to Mr. William Sparling, town clerk of Colchester, giving information respecting the state of the churchyard of that parish, *App.* 206.

Jews. The Jews always buried without the cities, and it was supposed the Temple was profaned by any approach of a dead body, *Hewson* 1906.

John's, St. (Southwark). See *Depth of Graves,* 2. *Flemish Burial-ground.*

John's, St. (Waterloo-road). Circumstances attendant upon an attack of illness experienced by witness after attending the funeral of a friend at St. John's, *White* 2030–2046.

K.

Katharine, St., Cree. State of the churchyard of St. Katharine Cree, in Leadenhall-street; it is not so full as Aldgate, but it is getting very full, *Harvey,* 1811, 1812.

Kensal-green Cemetery. It is flanked by a canal; they follow the very objectionable practice of placing several bodies in one grave, *Walker* 869——Evidence as to the remuneration of the clergy; existing practice at Kensal-green and other cemeteries, *Knapp* 927–929——Loss sustained by the incumbents of Paddington and St. Mary-le-bone by the cemetery at Kensal-green, although fees were reserved, *Bishop of London* 2948.

Kidd, Mr. Letter from Mr. J. Kidd, dated 22 April 1842, to the Chairman of the Committee, respecting the state of the churchyards in Oxford, and the measures taken for the establishment of a cemetery, *App.* 201.

King's College Hospital. There is a public hospital to the left of the burial-place in Portugal-street; it is a very improper locality for a hospital; number of patients it will contain, *Walker* 2069–2078——Position of King's College Hospital; no more bodies should be buried there, *Brodie* 2927–2929. 2931–2932——The books of King's College Hospital would show what diseases have prevailed there, *Ib.* 2934–2937.

No inconvenience whatever has been felt from the contiguity of the grave-yard in Portugal-street to King's College Hospital; no disease of any kind has originated from it, *Todd* 2407–2412. 2434–2443——The state of disease prevalent at King's College Hospital is pretty much the same as at all hospitals; comparison of the various rates of mortality at this hospital and at St. George's, *Ib.* 2426–2433.

Kingstown. Letter from Mr. O'B. Adams, M.D., dated 25 April 1842, to the Chairman of the Committee, respecting the state of the burying-grounds at Kingstown, and the measures taken for the establishment of cemeteries near Dublin, *App.* 198.

Knapp, Rev. Henry John, D.D. (Analysis of his Evidence.)—Vicar of Willesden, 906——Was for 27 years curate of St. Andrew Undershaft in St. Mary Axe; distressing state of the churchyard; accumulated mass of putrescent bodies; exhalations therefrom, 907——Effect upon his own health of living near the churchyard; to save his life he was advised to leave town, and take a small living, 908–911——Nature of his sickness, 914, 915——Excessive fulness of the churchyard, 911–913——Frequent cases of illness of ladies during divine service, 916–918——Modes of obviating it; the expense of burying in distant cemeteries described, 923–927——As to the remuneration of the clergy, existing practice at Kensal Green and other cemeteries, 927–929——Quantity of lead removed from the vaults of St. Andrew Undershaft, 918. 930–933——Proposed rate of 1 *d.* in the pound to defray extra expenses of burial, and to remunerate the clergy, 934–938——The present mode of burying is a temptation to theft, 939–942.

Knapp,

Report, 1842—*continued.*

Knapp, Rev. *H. J.* Letter from Rev. H. J. Knapp, dated 4 May 1842, to the Chairman of the Committee, respecting the removal of burial grounds from the metropolis, *App.* 196.

L.

Laffan, Sir *Joseph de Courcy.* Witness is not of opinion with Sir Joseph de Courcy Laffan, that the plague has in some instances arisen from the putrefaction of bodies in towns, *Campbell,* 1869.

Lane, George Dorkin. (Analysis of his Evidence.)—Member of the Royal College of Surgeons, and licentiate of the Society of Apothecaries, 2293, 2294——Statement of witness's sentiments generally, with regard to the healthiness or unhealthiness of burying in large towns, 2295–2340——Case of illness attended by witness at a house abutting on St. Martin's burial-ground in Drury-lane, 2295. 2297——The neighbourhood is very low, and the people very dirty; how far the health of the neighbourhood is affected by miasma arising from the burial-ground, 2298–2302——The effluvium rising up in the atmosphere of this town is likely to generate low fevers, 2304–2312. 2335–2337. 2340——There is no reason why the poor should not be buried at the cemeteries, as well as those that can afford to pay; it might be done by contract, 2313–2316.

The gas emanating from a human body is more injurious than that from an animal, 2319–2324——It would be desirable to have a compulsory law, to require the burial of the dead at a stated period after the decease, 2325–2327——To enable grave-diggers to continue their work, they must have recourse to spirits, 2328–2334. 2339——The gases emanating from the vaults underneath the churches in the Strand, or any other part of London, must be injurious to the health of the people, 2338.

Lane, James Michael. (Analysis of his Evidence.)—Lives at 30, Clement's-lane, close to the burial-ground, 707–712——Number of burials there weekly, 713–716——Case observed, in which a coffin was taken up in pieces a month after it had been buried, with bones and flesh hanging to it, 717——Another case in which a coffin was brought up quite fresh, 717–719——Never saw coffins burned, but has heard of them being bought for firewood, 721–723——The smell is very bad in hot weather; buildings by which the ground is surrounded, 724–726——Ill health of witness and his family, and sickness in the neighbourhood; there is no free passage of air, 727–735. 753, 754——Has frequently been obliged to close the window when at meals, 736——The walls of the house are damp, 737——Has observed a long thin fly coming out of the burial-ground, 738–740. 749–752——He would not live there if he could pay a higher rent; rent paid, 741–743——Would not object to the use of quick-lime, and has seen it used, 744–748——Constant practice of breaking up coffins to make room for more; description of instrument used, by whom and when done, 749–780*.

Leach, Mr. Letter from Mr. James Leach, high constable of Rochdale, dated 12th April 1842, to the Chairman of the Committee, giving information respecting the burial-grounds of that town, and their effects upon its general health, *App.* 203, 204.

Leaden Coffins:

1. *At St. George's, Southwark.*
2. *At St. Giles-in-the-Fields.*
3. *Whether they are a Protection against the Escape of Noxious Gases and Effluvia.*

1. *At St. George's, Southwark:*

Burials were permitted in the vaults of St. George's, Southwark, without leaden coffins, and the vaults were so offensive that the clergyman read the funeral service outside, *Abdy* 1320. 1322–1325. 1327–1329——No bodies are allowed to be buried in the vaults without a leaden coffin, *Houghton* 1574. 1589-1590.

2. *At St. Giles-in-the-Fields:*

Leaden coffins are not allowed to be buried in the churchyard of St. Giles's, *Tyler* 1509.

3. *Whether they are a Protection against the Escape of Noxious Gases and Effluvia:*

Stench coming from a leaden coffin, buried in 1789, struck against in making a sewer in the Strand, *Walker* 804, 805——Unnecessary expense of coffins; leaden coffins are not the least protection, *Ib.* 872, 873——Case in which a leaden coffin was seen by witness to burst from the gas within, *Pye* 1252, 1253.

Leaden coffins are a protection to persons entering a vault; if they be properly soldered no effluvia can escape, *Ford* 1743–1745——Interment in leaden coffins is not a safeguard against effluvium, unless they are of a certain thickness, *Baker* 2601–2604——A properly-made leaden coffin, in 19 cases out of 20, prevents the escape of gases, *Bishop of London* 2948.——*See* also *Gases.*

Report, 1842—*continued.*

Leadenhall-street. See *Bones.*

Leeds. Crowded state of the parochial burial-grounds in Leeds; investigation into the conduct of the sexton; proposed remedy for the evil; difficulties arising out of the variance on the subject of church-rates, *Eddison* 783——Insufficiency of the parish burial-ground for the deaths that take place, *Baker* 2507–2511——State of the different churchyards in Leeds, with reference to the population, *Ib.* 2512, *et seq.*——The cholera was most violent near the parish burial-ground, and fever is most prevalent there, *Ib.* 2535–2553——Amount of population of the township of Leeds; average deaths, *Ib.* 2560, 2561. 2565, 2566——Situation of the great towns near Leeds as to their burying-grounds, *Ib.* 2591–2598.

Mode in which witness would purchase a burial-ground for the town of Leeds, and buy out the rights of the clergy; in whom the control and superintendence should be vested, *Baker* 2557–2559. 2567–2579——Necessity for the enlargement of the grounds; refusal of a rate for that purpose, *Ib.* 2515–2534——Evidence respecting the refusal of a rate for the purchase of a new burial-ground for the town of Leeds, *Beckett* 2609–2612——Witness confirms Mr. Baker's evidence with respect to the town of Leeds in all points except one, the demand for a 1*s.* rate; witness's explanation of it, *Garland* 2901–2907——Letter from Mr. Nathaniel Sharpe, dated April 1842, to Mr. Ridsdale (for Mr. Savery), with an estimate of the extent of the churchyards of Leeds, *App.* 203.

Legislation. In the first instance, should be confined to towns of the largest size, *Rep.* v.——Resolution, that it be confined to the metropolis, and to places with a population above 50,000, *Ib.* vi.——All funerals should be undertaken under the authority of Government, *Walker* 899.

See also *Cemeteries. Prohibition of Interments in Towns.*

Leonard's, St. (Bromley). Cemetery established there; fees to be received by the clergy, *Bishop of London,* 3002.

Leonard, St. (Shoreditch). The churchyard is very bad; they have enlarged it, but there is a part where they cannot put any corpse without its floating, *Harvey* 1827——The graveyard is far from being very bad, as described in answer to question 1827 of the Evidence; they have graves as deep as 17 or 18 feet, without coming to water, *Yarrow* 1995, 1996——It has occurred, that at the depth of 14 or 15 feet they have come to water; this is pumped out; it is muddy from the soil; there is nothing offensive in the smell, *Ib.* 1997–2006——Size of the ground; proportion subject to be flooded, *Ib.* 2007–2009. 2020.

There is another burial-ground for the paupers in the Hackney-road; it is rather inferior than otherwise; the paupers are generally now buried at the mother church, *Yarrow* 2010–2013——Annual number of interments in the churchyard of St. Leonard's, Shoreditch, and in the pauper-ground in the Hackney-road, *Ib.* 2021–2023.

See also *Depth of Graves,* 2. *Disinterment of Bodies.*

Limehouse. Removal of coffins from Limehouse churchyard, *Miller* 1663——Size of Limehouse churchyard, *Ib.* 1673, 1674.

Lock Burial Ground (Dover Road). State of the Lock burial-ground in the Dover Road, belonging to the parish of St. George's, Southwark, for paupers; piles of coffins, bones, &c., *Abdy* 1320, 1321. 1326——It is still used, and nineteen years ago witness thought it was scandalous to go on burying there, *Ib.* 1330–1335——The Lock burial-ground in the Dover Road is under witness's control; the ground was left to the parish, *Houghton* 1598, 1599——Bad state of this ground formerly; improvement in it; size; number of bodies buried there, *Ib.* 1607–1614.

London, The Right Rev. Lord Bishop of. (Analysis of his Evidence.)—Twenty years ago, while an incumbent in the City of London, his Lordship was interested in the present subject, 2947——While residing in the rectory house of St. Botolph, Bishopsgate, in the churchyard, neither his own health nor that of his children was at all affected, nor on removing thence was it sensibly improved, 2948——The evils resulting from interment in towns are much exaggerated, and would not arise with proper care, *Ib.*——No grave should be opened within the memory of persons who witnessed the first interment, for the burial of fresh bodies, except of relations, *Ib.*——If four or five feet of earth is over a coffin, there is no reason to apprehend any evil from their decomposition, *Ib.*——No bodies should be allowed to be buried under churches, except in leaden coffins of a certain thickness, *Ib.*——A properly made leaden coffin, in nineteen cases out of twenty prevents the escape of gases, *Ib.*

Practice of the Church Building Commission to sanction the building of catacombs under churches, arched with brick or stone, and having no entrance within the church; no evil has arisen from interments there, 2948——In some old parish churches, as St. Martin's, Ludgate-hill, bodies have been interred in wooden coffins under the church, *Ib.*——Security should be taken that unconsecrated cemeteries should be preserved exclusively for christian burial, except in special cases where the Legislature may interfere, *Ib.*——Some arrangement should be made to secure the clergy a compensation, not only for the burial fees, but also for what are called complimentary fees, *Ib.*——

Report, 1842—*continued.*

London, The Right Rev. Lord Bishop of. (Analysis of his Evidence)—*continued.*

Loss sustained by the incumbents of Paddington and St. Marylebone, by the cemetery at Kensal Green, although fees were reserved, 2948——A small fee was secured to the clergy in the Highgate Cemetery Act, but they are losers, *Ib.*——Ten shillings is payable to the clergyman of the parish for every burial in the West London and Westminster Cemetery, and is thought sufficient, *Ib.*——The clergy will be obliged to examine the books of cemetery companies, in order to secure their fees, *Ib.*

Difficulty as regards the burial of the poor in cemeteries; a cheap and decent hearse might be provided for their use, 2948——No general law should be applied to all populous places, the circumstances of which greatly differ; it should be left to the local authorities to determine in what cases funerals should be prohibited, *Ib.*——Burial fees of certain London parishes stated, in order to show how dependent many of the clergy are upon that source of income, 2949–2952——The present incumbents would make some sacrifice, and it might be ensured, at all events, from their successors; care must be taken to leave them enough for the spiritual wants of the parish, 2953–2957——If a union of parishes had a cemetery with an officiating chaplain, the complimentary fees would be gradually discontinued, 2958–2960——The incumbent of a parish should be a party to the discontinuance of interment in any town, with an appeal to the bishop, 2961–2964.

If cemeteries were parochial the rights of the clergy would be preserved; his Lordship recommended unions of parishes for this purpose ten years ago, 2965——Assuming that ground were purchased by a rate upon the parish, there would be no objection to leaving a part unconsecrated for Dissenters, 2967, 2968——The Church Building Commissioners may apply to the Court of Queen's Bench for a mandamus to compel parishes to purchase additional burial-ground; cases of Watford and Bishop's Stortford in Hertfordshire, 2968, 2969——Cases of St. Giles-in-the-Fields and St. James, Westminster, in which local Acts were prepared to enable the parish to raise money for the purchase of a burial-ground, 2970——Propriety of Government undertaking the establishment of cemeteries considered, 2972, 2973.

Possibility of making cemeteries an agreeable promenade, as at Frankfort, 2973——Victoria Park would suffice as a cemetery for the north and east part of London for a century, 2973–2976——There would be a feeling amongst the people against the conveyance of funerals by railway, 2977, 2978——Personally his Lordship would not object to being buried with quicklime, but others might, 2979–2981——Some local authority should determine where a cemetery should be, 2982–2984——If the poorer classes would use a cheap conveyance, the expense of a funeral out of town probably would not be greater than a walking funeral in town, 2985——The right of relations to be buried in existing family vaults should be reserved under certain limitations, 2986–2989——And in family graves in churchyards, 2990, 2991——The objection to quicklime would be very general, and is connected with some of the best feelings of our nature, 2992——The funeral conveyance should carry both the corpse and the mourners, 2993–2996.

The cemetery fees payable to clergymen should only apply to burials in consecrated ground; but the fees should be so managed as not to hold out a premium to people to be buried in unconsecrated ground, 2997–3000——Various fees in different cemeteries; his Lordship is not prepared to say what specific sum the clergy should receive, 3001–3005——Acts regulating the powers of the Church Building Commissioners, in establishing new burial grounds on the application of the parish authorities, 3006–3012——The consolidation of the Church Building Acts is in progress, and the Commissioners would willingly undertake the responsibility of determining in what towns new burial-ground should be provided, 3013, 3014——The complimentary fees usually pass through the undertaker; a less sum paid directly would be more satisfactory to both parties, 3015–3018——The crowded state of the London churchyards drives some burials to private grounds, and diminishes the fees; the cemetery fees should be adjusted with reference to this circumstance, 3019–3023.

Interments should be prohibited in the private burial-grounds as well as in the churchyards, 3024——The feelings of people would probably be against more than one body being carried to the cemetery by one conveyance, 3025, 3026——His Lordship has never had reason to suppose that people have sometimes not been buried at all, 3027——The clergy would be willing to take from the cemeteries a fair average compensation for their precarious fees, 3028, 3029——In St. Giles's the fees have been kept up, as a new burial-ground was purchased 40 years ago, 3030——The parish clerks should be prevented, if possible, from being serious losers; the sexton has not the same claim, 3031——List of burial fees of different parishes, in the years 1838, 1839, and 1840, handed in, *Ev. p.* 194.

London, Bishop of. Remark made by the Bishop of London on the interments in St. Martin's (Ludgate) church, of late; they still continue to bury there, *Ford* 1726–1731, 1739–1742.

Lonsdale, Dr. Letter from Henry Lonsdale, M.D. of Edinburgh, dated 24th April 1842, to the Chairman of the Committee, respecting the effects of the putrescent exhalations from crowded burial-grounds upon the health of towns, *App.* 199.

Report, 1842—*continued.*

Lyme Regis. Letter from Mr. W. M. Tartt, mayor of Lyme Regis, dated 28 April 1842, to the Chairman of the Committee, respecting the state of the churchyards within the precincts of the town, and enclosing a statement of the number of burials from July 1837 to April 1842, *App.* 198.

Lynch, Jordan Roche, M.D. (Analysis of his Evidence.)—Agrees with Dr. Copland in all he has said, 2682——In the West London Union there are a great many courts and alleys, and the poor are always suffering under typhus fever; causes of this, 2683–2687——The side vaults in St. Sepulchre's church are all well constructed; there is good ventilation, and they are free from any taint or atmospheric impurity, 2688——The smell on the Sabbath-day at times, at St. Martin's, Ludgate-hill, is awful; they allow them to bury in wooden coffins, 2688, 2689——The vaults under St. Andrew's church, Holborn, are very well ventilated; they are formed on arches, still the miasma escapes, 2689, 2690 ——Witness confirms Dr. Copland's observations respecting ague and typhus fever, 2691, 2692——With proper regulations with regard to interments and privies, typhus fever might be unknown in the metropolis, 2693, 2694——Bringing the water by pipes from the country into the town, and preventing individuals drinking the water which has percolated through the churchyards, has been beneficial to the health of the country, 2695–2697——Insects which generate in churchyards described, 2698–2700.

Lyons, Bartholomew. (Analysis of his Evidence.)—Grave-digger at St. Ann's, Soho, 1046, 1047——For 24 years was at St. Martin's-in-the-Fields, 1048——During that time removed the whole of the bodies with help, to the catacombs and elsewhere, 1049–1051 ——His health was affected by the work; his sensations and remedies, 1052–1055—— Plan of digging deep graves at St. Ann's, and placing coffins one above another, and only partially covering the graves till full, 1056–1060——Practice with regard to the removal and burning of decayed coffins, and the burial of bones, 1060–1065——Mode of burning out the foul air, rapid accumulation thereof in graves, 1066–1069——Case in which a body fell upon witness while digging a grave; the coffin had been removed, and the head taken off, 1070–1081. 1083–1085——It had certainly been the practice before witness's time, for the gravediggers to strip the lead from the coffins, 1086–1096—— Has heard from several people that it has been the practice to take the bones of the dead and play at nine-pins with them, 1097–1099——Witness's pay, state of health, &c., 1100–1107.

Bad state and reputation of the Portugal-street burying-ground; nearness of the bodies to the surface, 1108–1118——Has seen old coffins dug up in St. Martin's-in-the-Fields, with nothing but bones in them, 1119–1128——Steam described as issuing from the deep graves as from dunghills; great heat of them even in cold weather, 1129–1135 ——Quantity of shavings burned in a grave to get rid of the foul air, 1136.

M.

Mahomedans. The Mahomedans almost invariably bury their dead out of the towns; their cemeteries are the places where the inhabitants congregate for health and enjoyment, *Bowring,* 1832.

Manchester-square. Effects of opening a sewer near Manchester-square, *Brodie* 2912. 2918.

Margaret, St. (Westminster). The commissioners for the improvement of Westminster in 1814, reported that St. Margaret's churchyard could not long be used as a burial-ground, *Walker* 821——Particulars extracted from the Lancet, 13th June 1840, concerning the death of three persons from miasma, arising from St. Margaret's churchyard, *Ib.*——State of St. Margaret's churchyard described, *Anderton* 2230, 2231—— Interments ought to be discontinued in St. Margaret's churchyard for several reasons, *Milman* 2744–2746——The number of interments weekly has diminished very considerably; the more opulent have removed their interments to the cemeteries, *Ib.* 2747.

See also *Broadway* (Westminster.)

Martin's Burial-ground (Borough). Calculations as to the number of bodies that could be contained in Martin's ground in the Borough, and the number that have been buried there, *Walker* 812——Number of bodies interred in the last 10 years, and previously; size of the ground, *Haycock* 948–961——The grounds of St. Mary (Newington), and Bermondsey Old Church, are worse than Martin's burial-ground; witness has been there as bearer, *Ib.* 991–996——Name of the minister; burial fees, &c. *Ib.* 1004–1016 ——The ground has risen six inches in 10 years, *Ib.* 1017, 1018.

See also *Depth of Graves,* 2. *Effluvia,* II. 2. *Gases,* 2. *Health,* II. 3.

Martin's, St., Burial-ground (Drury-lane). The neighbourhood is very low, and the people very dirty; how far the health of the neighbourhood is affected by the miasma arising from the burial-ground, *Lane* 2298–2302.

Martin's, St. (Ludgate-hill). At St. Martin's, Ludgate, there is no churchyard, and paupers have been buried in the vaults in common wooden coffins; cart-loads of decayed coffins, &c. were carted away; the Bishop of London has directed that no further interments should take place under the church, *Anderton* 1512–1514——The dead are buried

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Report, 1842—*continued.*

Martin, St. (Ludgate-hill)—continued.

all in vaults; there is no burying-ground; size of the vaults; number of bodies they contain, *Ford* 1705–1709——Practice of clearing a vault from its contents in order to place other bodies in it, *Ib.* 1711–1717. 1723——One or two of the vaults are very dry; there are flues like chimnies in the vaults, *Ib.* 1721——Interments in wood are allowed, *Ib.* 1724, 1725.

Effluvia arising from the vaults in damp or warm weather, *Ford* 1710. 1718–1720——The congregation have never complained of any effluvia from the vaults, *Ib.* 1732.

See also *Effluvia*, II. 2. *London*, Bishop of.

Martin's, St., in-the-Fields (Drury-lane). One of the worst burial-grounds in London is that of St. Martin's-in-the-Fields in Drury-lane; immense number of burials; mode of raking over the graves, *Helsdon* 34–43——All the neighbourhood complain of the ground as a serious nuisance, *Ib.* 44–46——Number of burials weekly, *Ib.* 49——Witness thinks the neighbourhood unwholesome, but is not in bad health, *Munns* 586–590——The ground has risen five feet above the street, *Ib.* 605–607——Witness has seen old coffins dug up in St. Martin's-in-the-Fields, with nothing but bones in them, *Lyons* 1119–1128.

See also *Depth of Graves*, 2.

Mary-le-bone, St. See *Kensal-green.*

Mary's, St. (Birmingham). Crowded state of the burial-ground in the parish of St. Mary's, Birmingham; it is situated in the heart of the town; the smell and effluvia are most abominable and disgusting, *Hewson* 1871–1873. 1891–1893——In digging fresh graves they frequently turn up bones and pieces of human flesh, *Ib.* 1874, 1875——Size of the churchyard; number buried there in the course of the year; length of time it has been open; the ground has been very much raised, *Ib.* 1883–1888. 1901–1905——Name of the rector of St. Mary's; by whom the fees are received, *Ib.* 1887–1890.

Mary's, St. (Newington). See *Martin's Burial-ground.*

Mary's, St. (Southampton). Letter from Mr. Peter Dickson, Mayor of Southampton, dated 20 April 1842, to the Chairman of the Committee, giving information on the state of the burial-ground of the parish of St. Mary in that town, and on the measures taken for the establishment of a cemetery, *App.* 201. 204, 205.

Mary's, St. (Vinegar-yard). Number of burials that usually take place; supposed number of bodies therein, *Solomons* 229–235.

See also *Depth of Graves*, 2.—*Destruction of Coffins.* *Effluvia*, II. 2.

Medical Police. If the practice of keeping bodies a long time before interment were prohibited, there should be a medical police to inspect bodies before interment, *Walker* 887–892.

Metropolitan Churchyards. The state of the churchyards in the metropolis is disgraceful to a civilized country, and the general feeling is against further interments in them, *Anderton* 1517–1519——All the parish burial-grounds within the bills of mortality are a disgrace to the country, *Ib.* 2237, 2238——Proper legislative enactments which might be framed respecting them, *Ib.* 2239–2246.

Miasma. See *Andrew's, St.* (Holborn). *Fevers.*

Meyler, Mr. *Morgan.* Letter from Mr. W. Morgan Meyler, dated 18 April 1842, to the Chairman of the Committee, giving information respecting the state of the churchyards of the city of Gloucester, and their effects upon the general health of the town, and suggesting a remedy for the evil, *App.* 203.

Miller, William. (Analysis of his Evidence.)—Jobbing and labouring man; has been a gravedigger in Globe-fields, Mile End; it is a private burying-ground belonging to Mr. Thomas Tagg, situated on the left-hand side of Mile End, going up Globe-road, 1615–1619——Number of pits dug in it for the depositing of bodies previously interred, to make room for others to go into the graves, 1620–1637——Size of the ground; number of bodies which have been buried there since the year 1820, 1638–1640——Circumstances connected with a theft of bones, nails, and plates off the coffins in October 1839, 1641–1649——Witness has not known coffins to be disturbed in less than 14 years after interment, 1650–1652——By whom the burial service is performed, and how, 1653–1657——Witness has seen skull-bones and arm-bones and teeth lying on the surface of the earth in Stepney churchyard; has seen children playing with the bones, 1658–1660——Filthy and disgusting state of Bethnal-green churchyard, 1661, 1662——Removal of coffins from Limehouse churchyard, 1663.

Witness has seen nasty great black things as big as his finger crawling about in these churchyards; when the sheep are grazing, they pick them up and chew them as well as the grass, 1664. 1698–1702——Witness could not perform grave-digging without the use of spirits, 1665, 1666. 1685——It has been the regular practice to chop through coffins and bodies when they come in the way in the Globe-fields ground, 1667, 1668——Witness has been affected in his health from this work, 1669–1672——Size of Limehouse churchyard, 1673, 1674——Persons affected with the effluvia from the Globe-fields

Report, 1842—*continued.*

Miller, William. (Analysis of his Evidence)—*continued.*

fields grounds; there are some coffins within six inches of the surface, 1675–1680——Fees at this ground, 1681——Witness's pay, 1682–1684. 1686–1689——When witness has been digging a new grave, what he calls bloody corruption used to run down from the old grave near it, 1691–4–1697——Case of a cow dying in a few hours from eating the grass which had been cut from Globe-fields, 1703.

Milman, Rev. *Henry H.* (Rector of St. Margaret's, Westminster). (Analysis of his Evidence.)—Statement of witness's opinion with respect to interments; first, as regards the question of legislation; secondly, in what way the remedies can be applied so as not to interfere with vested rights; and, thirdly, as to how far the nuisance itself exists, 2728——If the Legislature determine to discontinue burials in towns, public cemeteries are the only plan which could be adopted, with a certain reservation of rights to the clergy, *Ib.*——Sources of expense which would be incurred by the change; the purchasing of land; the fees to the clergy; and the additional expense of conveying the paupers to their last home, 2729, 2730——The power should be vested in the clergy in the event of a legislative enactment, 2731–2733.

Witness is not aware of any evil being produced by burying under churches and chapels; in what the burying in churches originated; within the last century it has been prohibited in a great portion of the large capitals of Europe, 2734——Interments ought to be discontinued in St. Margaret's churchyard for several reasons, 2744–2746——The number of interments weekly has diminished very considerably; the more opulent have removed their interments to the cemeteries, 2747——The poor are generally interred in the Broadway churchyard; it is a crowded churchyard, 2748–2750——Great pain might result to the feelings of some persons who wished to be interred by the side of their relatives, from a legislative enactment prohibiting interments in the grave-yards in London, 2751–2758——Witness would prefer a total prohibition, 2755——Witness and his family resided for 17 years at Reading; the rectory was in the churchyard, which was very full; they never experienced any inconvenience from it, 2759–2773. 2775, 2776*.

By a well-regulated scheme, the funerals of the poor might be conveyed to a distance of three or four miles from London without any increased expense, 2774——Mode in which, in the event of a legislative enactment, the vested rights of the clergy, and other parochial authorities, might be secured, 2777–2786——If cemeteries were opened without some such provision, the emoluments of the clergy of London would be half swept away, 2783. 2792, 2793——Whether a tax for the better interment of the dead would be objectionable to the rate-payers of the parish of Westminster, 2787–2789——Classes of fees received by the clergy, 2790, 2791——Reasons why witness, in the event of a legislative enactment, would suggest the exception of Westminster Abbey and St. Paul's, 2794–2808.

Monopoly. Abuses which prevail in all burial-grounds; monopoly of individuals irresponsible to any authority, *Helsdon* 51–53.

Monuments. The multitude cannot have costly monuments erected, but in an extensive burial-place there is a great theatre for public taste, *Bowring* 1834——The clergy would lose the fees on monuments, grave-stones, and tablets, by interments being removed from towns, *Bishop of London* 2950.

Morals of the People. The system of burial in Golden-lane, Barbican, affects the morals of the people, *Helsdon* 32, 33.

Mortality:

Clement's-lane.—Great sickness and mortality in the neighbourhood of Clement's-lane; it is in a filthy state, *Walker* 790, 791.

Enon Chapel.—Witness has no doubt three times as many persons die in the street near Enon chapel as in any other part of the parish, *Burn* 302.

See also *Health of Large Towns.*

Mounsey, Mr. Letter from G. G. Mounsey, Mayor of Carlisle, dated 23 April 1842, to the Chairman of the Committee, respecting the state of the burial-grounds in that city, *App.* 199.

Munns, Thomas. (Analysis of his Evidence.)—Plane-maker in Drury-lane, 570–572——In the burial-ground of St. Martin's-in-the-Fields they scarcely dig graves, but make them with boards, 573–578——Graves are sometimes two feet deep, more or less, 579. 614——Witness has seen bones, entrails, and coffins not decayed, thrown up in digging graves; the bones are removed, and thrown down a flap, 580–583——Grave-diggers require a little extra drink, 584, 585——Witness thinks the neighbourhood unwholesome, but is not in bad health, 586–590——Has seen many pails of water thrown over the coffins before the earth was filled in, to make them rot as soon as possible, 591–595——Has constantly seen the gravedigger move coffins for his own use, 596–600——Has seen him smash two or three skulls in digging a grave, 602-604——The ground has risen

Report, 1842—*continued.*

Munns, Thomas. (Analysis of his Evidence)—*continued.*

risen five feet above the street, 605–607——All working men fly to spirits when they have a nasty job, 610–612——The people, especially the Irish, would object to quick lime being put in with the bodies, 619, 620——Graves have sometimes been kept open two or three months, with nothing but boards and a little earth over them, 621–630.

Mutilation of Dead Bodies. It was a common occurrence at St. Ann's, Soho, under Fox the gravedigger, to mutilate the remains of the dead, *Copeland* 1398–1401.
See also *Destruction of Coffins.*

Myddleton, Sir *Hugh.* Great effect of Sir Hugh Myddleton's enterprise in bringing water from a distance, in diminishing disease in the metropolis, *Copland* 2673.

N.

Naples. The public would not submit to the Neapolitan plan of having a vault for every day in the year, *Walker* 835——The feeling against the Neapolitan plan might be removed, if executed in a more decent manner, *Ib.* 838, 839——Practice near Naples of having 365 vaults, one for every day in the year, *Copland* 2679, 2680.

New Kent Road. Description of a graveyard in the New Kent Road, belonging to Messrs. Hoole and Martin, *Whittaker* 458–475.

Norwood (Middlesex). Crowded state of the churchyard of Norwood, Middlesex; they can scarcely find room to bury a fresh corpse, *Hewson* 1799. 1898.

Nottingham. Letter from Mr. H. C. Stenton, dated 10 March 1842, to the Chairman of the Committee, referring to the state of the churchyard in Nottingham, *App.* 207.

O.

Olave, St., and *St. John* (Southwark). The parishes of St. Olave and St. John, Southwark, are in treaty for the purchase of a joint burial-ground, *Russell* 2488, 2489.
See also *Flemish Burial-ground.*

Oldham. Letter from Mr. John P. Brierly, head constable of Oldham, dated 19 April 1842 to the Chairman of the Committee, respecting the state of the burial-grounds in the borough and in the out townships, *App.* 202.

Opening of Graves. Graves have sometimes been kept open at St. Martin's-in-the-Fields for two or three months, with nothing but boards and a little earth over them, *Munns* 621–630——No grave should be opened within the memory of the person who witnessed the first interment, for the burial of fresh bodies, except of relations, *Bishop of London* 2948.

Oxford. Letter from C. J. Sadler, Alderman and J. P., to the Chairman of the Committee, dated 30 April 1842, respecting the state of the churchyards of Oxford, and the measures taken for the establishment of a cemetery, *App.* 197——Letter from Mr. J. Kidd, dated 22 April 1842, to the Chairman of the Committee, on the subject of the state of the churchyards in Oxford, and the measures taken for the establishment of a cemetery, *Ib.* 201.

P.

Paddington. Amount of burial fees in 1838, 1839, and 1840, *Bishop of London,* 2949—— The burial-ground at Paddington was enlarged by a considerable addition 10 or 12 years ago, *Ib.* 3029.

Pall Bearers, Pall bearers are likely to be affected injuriously, *Whittaker* 424–427.

Pancras Road Cemetery. The cemetery in St. Pancras-road is in a very admirable state; a large body of the whole square has never been used, *Tyler* 1416——The parish of St. Giles's-in-the-Fields raised a sum of money on annuities to purchase the cemetery, which has been paid off, *Ib.* 1421–1424——Regulations in this ground as to the depth of graves, and the quantity of earth above the coffins, *Ib.* 1449–1452——Extent to which it is occupied; length of time calculated before it will be full, *Ib.* 1453–1462.
See also *Depth of Graves,* 2.

Paris. In Paris they have an excellent plan for the interment of the poor; this plan described, *Walker* 832——No burials are allowed in Paris: the same law should be made in London: the main difficulty is the burial of the poor, *Ib.* 861–865——The cemeteries in the neighbourhood of Paris are, many of them, agreeable and healthy walks, *Bowring* 1832——Probable cause of the diseases at Paris previously to the purification of the Seine, *Copland* 2661. *See* also "*Fosses Communes.*"

Report, 1842—*continued.*

Parish Clerks. The effects of the proposed change upon the emoluments of parish clerks is a matter to be considered, *Rep.* vi.——The parish clerk in St. Andrew's Parish, Holborn, derives very considerable emoluments from interments, *Robinson* 2859——The principal part of the parish clerk's emolument in Whitechapel is derived from the burials, *Champneys* 2893, 2894——The parish clerks should be prevented, if possible, from being serious losers; the sexton has not the same claim, *Bishop of London* 3031.

Parish Rates. Parochial authorities to impose a rate for forming cemeteries, *Rep.* vi.

See also *Burial Fees. Cemeteries. Clergy*, 2. *Leeds. Southampton. Whitechapel.*

Parker, Henry John. (Analysis of his Evidence.)—Belongs to the police force; No. 10, K. division, 2200, 2201——Circumstances connected with a disgusting scene witnessed by a person from the Eastern Counties Railway in the burial-ground belonging to Thomas Tagg, Globe-fields, Mile-end, 2202–2217.

Paul's, St. (London). St. Paul's churchyard is very full, *Anderton* 2236.

See also *St. Clement Danes. Westminster Abbey* and *St. Paul's.*

Paul's, St. (Leeds). State of the vaults under St. Paul's churchyard, Leeds; swarms of insects in them, *Baker* 2588, 2589.

Pennant. Pennant's account of the state of St. Giles's churchyard no longer applies, *Tyler* 1476, 1477.

Peter's, St. (Cornhill). The churchyard is getting very full, but a grave may be had of any depth, *Harvey* 1816.

Peter's, St. (Leeds). The position of St. Peter's burial-ground is the worst part of the town, *Baker* 2554.

Piedmont. Letter from —— Revel, dated 28 March 1842, to the Chairman of the Committee, respecting the laws regulating the establishment of cemeteries in Piedmont, *App.* 205.

Pitts, Samuel. (Analysis of his Evidence.)—A cabinet-maker, and formerly an attendant at Sion chapel, Clement's-lane, 123–127——Abominable state of that chapel from the interments; insects that infested it; smells arising, &c. 128–131. 199——Size of the chapel; supposed number of bodies buried underneath; effects of the effluvia upon the congregation, 132–148——A great many coffins were removed to make room for others, and burned, 149, 150——The burial fees were small, and went to the minister, 151–154——A sewer passed under the chapel, which the commissioners obliged the minister to arch over; the remains of bodies may have fallen into it, 155–160——The insects supposed to have arisen from putrefaction; they were similar to bugs with wings, 161, 162.

Enon chapel is entirely surrounded by houses, except on one side, 163——Witness believes that the abduction of coffins proceeded to a great extent, and that they were burned in the minister's house, 164–166——The minister built the chapel himself as a speculation; it is now shut up, 167–171——Offensive effluvia whenever the trap door was opened for letting down coffins: must have been injurious to the neighbourhood, 172–175——The minister had a Sunday-school, which attended the chapel for about six hours, 176–182——Witness's wife used frequently to come home ill from chapel, and has not since been a healthy woman, 184——The smallness of the fee induced great numbers of the poor to be buried there, 187–192——Amount of the fee, 197, 198——There could not have been room for the number of coffins unless many had been destroyed, 200–204——Persons were taken home fainting nearly every Sunday, 205, 206.

Portugal. In Portugal, where quick lime is used for the purpose of destroying corpses, some of the churchyards are exceedingly offensive, *Bowring* 1836.

Portugal-street Burial-ground. Bad state and reputation of it; nearness of the bodies to the surface, *Lyons* 1108–1118——Offensive state of the burying-ground in Portugal-street; case of the workhouse being denounced as unfit for a hospital from its proximity to the burial-ground, *White* 2056–2060.

See also *Effluvia. Gases. Health*, II. 4. *King's College Hospital. St. Mary-le-Strand.*

Private Burial-grounds. Interments should be prohibited in the private burial-grounds as well as in the churchyards, *Bishop of London* 3024.

See also *Burial-fees.*

Proceedings of the Committee. Minutes thereof, *Rep.* viii–xi.

Prohibition of Interments in Towns. Opinion of the Committee that a legislative enactment, prohibiting interments in towns and their vicinity, is required, and should emanate from the Goverment, *Rep.* vi.——The prohibition to be absolute in towns with above 50,000 inhabitants, except in the case of family vaults already existing, *Ib.*——There should

Report, 1842—*continued.*

Prohibition of Interments in Towns—continued.

should be an Act absolutely prohibiting burials in towns; no other interference could accomplish the end, *Bowring* 1835——The incumbent of a parish should be a party to the discontinuance of interment in any town, with an appeal to the bishop, *Bishop of London* 2961–2964——A legislative enactment prohibiting the interment of the dead within the precincts of the town of Leeds would be absolutely essential to health and most acceptable to the inhabitants, *Baker* 2455. 2562–2566——Witness would prohibit the burial of all classes, either rich or poor, in the present churchyards, *Anderton* 2247.

Whether it would be better to prohibit the burying in the grave-yards in London altogether, or to permit it only on the payment of a large fee, *Robinson* 2838–2848——Witness trusts that no law will be passed to prohibit funerals in London churchyards, *Abdy* 1317——No general law should be applied to all populous places, the circumstances of which greatly differ; it should be left to the local authorities to determine in what cases funerals should be prohibited, *Bishop of London* 2948.

See also *Private Burial-grounds.*

Prout, Dr. Statement by him that previous to the invasion of the cholera, the atmosphere was specifically heavier; his opinion that there was a quantity of gas floating in the air, *Walker* 905.

Prout, Mr. Letter from Mr. William Prout, dated 25 May 1842, to the Chairman of the Committee, relative to the effects of putrid exhalations from churchyards, and recommending the establishment of public cemeteries, *App.* 213.

Public Taste. See *Cemeteries. Monuments. Putrid Fever. Sulphuretted Hydrogen.*

Pye, Michael. (Analysis of his Evidence.)—Has worked as grave-digger in St. Clement Danes, 1219–1221——Fullness of the ground in Portugal-street; coffins are constantly ordered to be cut through to make a grave, 1222–1225——Number of coffins in the vaults under the church; smell arising when the vaults are opened 1226–1231——Anger of Mr. Fitch, the sexton, when a man of the name of Irving examined Portugal-street churchyard and probed the ground, 1232–1234——Instances in which witness's health has been affected, 1235——He has been obliged to drink spirits, 1235, 1236——To witness's knowledge coffins are cut up in the vaults, and the lead removed, and the wood and bones or bodies disposed of, 1237–1245——The common practice in digging graves is to break through wooden coffins, remove the wood, and place the remains at the bottom of the grave, 1246–1251. 1257, 1258——Case in which a leaden coffin was seen by witness to burst from the gas within, 1252, 1253——Rules as to the digging of deep graves; payment per foot, 1259–1270——Between each interment the grave is filled up, with the shoring boards kept in, 1271–1273——Grave-digging is a very unhealthy employment; witness has been in much better health since he left it, 1274–1281.

Q.

Quick Lime:

1. *Whether any Advantage would proceed from putting it into Coffins.*
2. *Objection of the Middling and Lower Classes to the Use of it.*
3. *Use of it in all Grounds, particularly at Enon Chapel.*

1. *Whether any Advantage would proceed from putting it into Coffins:*

Persons could not object to the use of quick lime; in dry ground it would be of great use, but not in wet ground, *Eyles* 1216–1218——The use of quick lime and chloride of lime would be of service, and the opposition to it would be slight, *Copland* 2676–2678——Quick lime put into coffins would have the effect of destroying the body and preventing effluvia, *Brodie* 2938.

Doubt as to whether quick lime introduced into coffins would prevent putrid smells, *Bowring* 1836–1838——The period necessary for the decomposition of a body from quick lime being introduced into the coffin must depend very much on the state of the body, *Walker* 2079–2086——The purposes of interment are best fulfilled when rapid decomposition takes place, *Ib.*——It would not be necessary to apply lime, provided the bodies were buried outside the town, *Fellowes* 2614.

2. *Objection of the Middling and Lower Classes to the Use of it:*

Poor people would have a strong prejudice against having quick lime put into the coffins, *Carr* 683–685; *Hewson* 1895, 1896; *Baldock* 1925; *Baker* 2556. 2583, 2584; *Robinson* 2857, 2858——The people, especially the Irish, would object to quick lime being put in with the bodies, *Munns* 619, 620——It would promote health to put quick lime into coffins, but it would be objected to, *Walker* 875——There would be objections to the use of quick lime, although it is much used on the continent, *Tyler* 1467——Probable

Report, 1842—*continued.*

Quick Lime—continued.

2. *Objection of the Middling and Lower Classes, &c.*—continued.

bable prejudice among the middling and lower classes to a law that there should be a quantity of quick lime put into the coffin, *Anderton* 2248.

Objection of the population of the parish of St. Stephen, Coleman-street, to quick lime being placed in the coffins; they would object now, as much as at any former time, to its insertion, *Harker* 1963–1973——Putting quick lime or chloride of lime in the coffins would do a great deal of good; but it would be objected to among the poorer classes, *Yates* 2898, 2899——Personally, witness would not object to being buried with quick lime, but others might, *Bishop of London* 2979–2981——The objection to quick lime would be very general, and is connected with some of the best feelings of our nature, *Ib.* 2992.

4. *Use of it in all Grounds, particularly at Enon Chapel:*

Quick lime is much used in all the grounds; people would not like it to be used as a system for destroying bodies in a short space of time, *Whittaker* 565–569——Quick lime has been used to a great extent at Enon chapel, *Walker* 2087.

See also *Portugal.*

R.

Railways. There would be a feeling amongst the people against the conveyance of funerals by railway, *Bishop of London* 2977, 2978.

Randall, Dr. Letter from Thomas Randall, M.D., dated 12 April 1842, to the Mayor of Oxford, respecting the state of the burial-grounds of that town, *App.* 204.

Reading. Witness with his family resided for 17 years, at the rectory at Reading, in the churchyard; they never experienced any inconvenience from it, *Milman* 2759–2773. 2775, 2776*.

Relatives. Family vaults already existing to be exempted from the operation of the proposed enactment, *Rep.* vi.——The descendants of persons buried in the metropolitan churchyards expect to be buried there themselves, *Abdy* 1318——Desire on the part of persons to be buried where their ancestors were buried, *Robinson* 2838——The right of relations to be buried in existing family vaults should be reserved under certain limitations, *Bishop of London* 2986–2989——And in family graves in churchyards, *Ib.* 2990–2991.

Rents (Clement's-lane). Witness would not live in Clement's-lane if he could pay a higher rent; rent paid, *Lane* 741–743.

Revel, Mr. Letter from —— Revel, dated 28 March 1842, to the Chairman of the Committee, respecting the laws regulating the establishment of cemeteries in Piedmont, *App.* 205.

Reveley, Mr. Letter from Mr. Hugh Reveley, J.P., dated 17 March 1842, to the Chairman of the Committee, respecting the practice prevailing in the parish of Bryn-y-gevin, North Wales, of burying corpses in the body of the church without leaden coffins, *App.* 206.

Robinson, Rev. *John Trevor.* (Analysis of his Evidence.)—Witness is not aware of any nuisance having arisen, or any noxious effects having been produced upon the health of the population in the vicinity of the burial-grounds, 2809——In the parish of St. Andrew's, Holborn, there is a general approbation expressed of some measure which would put a stop to interment in populous places, *Ib.*——Witness concurs in the evidence given by Mr. Milman, *Ib.*——Expense which would arise from a new legislative enactment, 2810–2812. 2830——Under whose control the burials should be conducted, 2813——Scheme by which the vested rights and the security of the existing incomes of the clergy might be preserved, 2814–2817——Whether while continuing to them their vested rights, it would be desirable to require from them the superintendence and direction of the cemeteries, 2818–2829——It would be an objectionable proceeding to set aside a portion of the ground for persons dissenting from the Church, 2832–2837.

Desire on the part of persons to be buried where their ancestors were buried, 2838——Whether it would be better to prohibit the burying in the grave-yards in London altogether, or to permit it only on the payment of a large fee, 2838–2848——The compensation to the clergy should be in proportion to the average income, 2849–2856——Putting quick lime into the coffins would create a very strong feeling of disgust among the middling or lower classes, 2857, 2858——The parish clerk in witness's parish derives very considerable emoluments from interments, 2859.

Rochdale. Letter from Mr. James Leach, High Constable of Rochdale, dated 12 April 1842, to the Chairman of the Committee, giving information respecting the burial-grounds of that town, and their effects upon its general health, *App.* 203, 204.

Royal Funerals. It commonly happens that people are injuriously affected in attending royal funerals, *Collier* 2110–2112.

Report, 1842—*continued.*

Russell, Rev. *John* D.D. Rector of Bishopsgate.—(Analysis of his Evidence.) Inconvenience of burying in churches; instances at St. Michael's, Wood-street, and St. Michael's, Queenhithe; at Bishopsgate no real inconvenience has been felt from burials; size of the churchyard, &c., 2444. 2455——Comparison of the number of deaths registered in the parish of Bishopsgate and the number buried at the parish churchyard; one-third are unaccounted for; probable causes of this fact, 2444–2454. 2473–2476——The interment of bodies in large towns, where there is not sufficient space, is very inconvenient, 2456, 2457——Whether several of the parishioners who have died may not have been buried in Globe-fields or elsewhere, on account of the lower fees, 2458–2463——Possibility of their having been buried in the churchyard fraudulently, to avoid fees, 2464–2468——Burial fees at Bishopsgate, 2469, 2470——The present sexton has no fees, but a fixed salary, 2471, 2472——At Bishopsgate the fees are very low, and no charge has been made for paupers during the time of three or four rectors, 2477–2480.

Individually witness would gain if all bodies were buried in the cemeteries, and fees allowed to the clergy of the parishes whence the bodies come, 2481–2483——The clergy would be disposed to agree to such an arrangement, 2484–2487——The parishes of St. Olave and St. John, Southwark, are in treaty for the purchase of a joint burial-ground, 2488, 2489——Arrangements might be made by parishes or unions with the cemeteries, for the burial of paupers, 2490–2492——The authority for purchasing land or conducting the interment of paupers might be well vested in the minister and churchwardens for the time being, 2493–2495——There are constant disputes arising out of the present system of interment; it would be a great satisfaction to witness if it were removed, 2496–2500——The clergy are differently circumstanced in regard to fees; some have nothing but fees to live upon, 2501——Statement as to the position and unhealthiness of the rectory house of Allhallows-on-the-Wall, 2501–2503——Any legislative enactment which did not interfere with the vested rights of the clergy would be agreeable to them, 2502.

Russell Court Burial-ground (St. Mary-le-Strand.) Witness, one of the Committee, has visited several burial-places in London, *Ainsworth* 1303, 1304——Was refused admittance into Russell-Court burial-ground, *Ib.* 1305.

S.

St. Clement Danes. Witness's house overlooks the burial-ground of St. Clement Danes; bad health of himself, family, and lodgers, since he has lived there, *Irwin* 68–84——The health of witness's family cannot have been injured by keeping paints in the house; their good health before they lived in their present situation, *Ib.* 101–110——Removal of earth lately from St. Clement Danes churchyard; where shot, *Eyles* 1191–1195——The sexton orders persons to dig a grave in a particular place and then leaves them, *Ib.* 1196–1199.

Filthy state of the pauper-ground of St. Clement Danes, close to the almshouses; steam arising from it, *Eyles* 1200–1206——Witness was refused admittance to the vaults of St. Clement Danes church when he went as a member of the Committee to visit them, *Acton* 1286, 1287——Witness considers St. Clement Danes little better than burying in our town streets, and also St. Paul's, *Anderton* 2233.

See also *Bones. Vaults. Water,* III. 2.

St. Mary Axe. See *Bones. Gases,* 2.

St. Mary-le-Strand. The burial grounds of St. Mary-le-Strand and Portugal-street are both so bad there is no telling the difference, *Carr* 687–690——St. Mary-le-Strand burial-ground is raised about four feet above the surrounding level, *Ib.* 695–699.

See also *Bones.*

Sadler, Mr. Letter from C. J. Sadler, Alderman and J.P., to the Chairman of the Committee, dated 30 April 1842, respecting the measures taken for the establishment of a cemetery near the city of Oxford, *App.* 197.

Savery, Mr. Letter from Mr. Charles Savery, dated 18 March 1842, to the Chairman of the Committee, giving information respecting the state of the grave-yards of Bristol, *App.* 205, 206.

Savoy Burial-ground. Sickness experienced by witness in removing earth from the Savoy burial-ground, *Burn,* 295–297——The Savoy burial-ground is made into a garden, and is the finest little ground in London, *Carr* 691–694.

Searchers. Witness at the Portugal-street burial-ground observed holes made by the searchers, which must let out foul air, *Fox* 1411.

Sepulchre's, St. Scene witnessed at St. Sepulchre's in clearing out a vault; removal of bones to the bonehouse, *Irwin* 97–100.——The side vaults in St. Sepulchre's church are all well constructed; there is good ventilation, and they are free from any taint or atmospheric impurity, *Lynch* 2688.

Report, 1842—*continued.*

Sewers. It was generally believed that bodies were slipped down the sewer at Enon chapel, otherwise the place could not have contained so many; this made the commissioners strict in bricking it over, *Burn* 278–281.

See also *Manchester-square.* *Strand,* The.

Sextons. The present sexton of Bishopsgate has no fees, but a fixed salary, *Russell* 2471, 2472——The case of the sexton, in point of emoluments from burials, is different from that of the parish clerk; the sexton is paid the same as any other labourer, *Bishop of London* 3031.

Sharpe, Mr. Letter from Mr. Nathaniel Sharpe, surveyor, dated April 1842, to Mr. Ridsdale (for Mr. Savery), with an estimate of the extent of the churchyards at Leeds, *App.* 203.

Shaw, William. (Analysis of his Evidence.)—Serjeant of police, K. division, No. 2, 2218, 2219——Evidence respecting a disgusting scene which has come under witness's knowledge with regard to the grave-yard in Globe-road, 2220–2228.

Sheen's Burying-ground. The opening of a burying-ground some years ago, called Sheen's burying-ground, has reduced the number of burials in Whitechapel ground considerably, *Wallace* 1548.——Some of witness's parishioners are buried in Sheen's burial-ground, which stands within a stone's throw of the church; size of it, *Champneys* 2865–2867.

Sheffield. Letter from Mr. J. Innocent, Mayor of Sheffield, dated 6 May 1842, to the Chairman of the Committee, enclosing information relative to the state of the burial-grounds of that town, *App.* 207, 208.

Shillibeer, Mr. Carriage invented by Mr. Shillibeer to take a corpse and mourners to the burial-ground, *Harker* 1993.

Sickness. Witness is certain that sickness is more prevalent in houses close to churchyards, *Walker* 797——Sickness is most prevalent in the city; in the neighbourhoods of Spitalfields and Bethnal-green, *Harvey* 1829.

Skittles. Witness has heard from several people that it has been the practice to take the bones of the dead and play at nine-pins with them, in St. Ann's, Soho, *Lyons* 1098, 1099——Witness has seen a man named Fox, the gravedigger at St. Ann's, Soho, and his assistants, play at skittles with the bones and skulls, *Copeland* 1376, 1377.

Society of Friends. Statement respecting the burial-grounds of the Society of Friends in the metropolis and the provinces, together with a table of the interments in the metropolitan burial-grounds, *App.* 213, 214.

Solomons, Moses. (Analysis of his Evidence.)—Resides in Vinegar-yard, Drury-lane; his staircase windows look on to the churchyard of St. Mary's, 207–212. 214——Has seen the gravedigger take a coffin out of the ground, take out the body and chop the head off, so that he could take it out of the ground, 213——The graves are dug deep, and coffins placed one upon another nearly to the surface, 215–217——The smell is sometimes so strong as to oblige him to close the windows, 218–222. 225–227——Number of burials that usually take place; supposed number of bodies therein, 229–235——Has often seen coffins broken up by the gravedigger, 236–246.

Southampton. Great want of accommodation for the burial of the dead in that town, *Deacon* 2616——The common burial-ground for the town is only two acres two roods, in the heart of the town; has been used for 500 years; and in the last four or five, the average number of burials has been 500, *Ib.* 2617–2621.

The borough council determined to apply to Parliament for a cemetery on the common, but await a general measure, *Deacon* 2621——Difficulty in obtaining the consent of the rate-payers to take part of the common, *Ib.* 2622-2624——Explanation of the difficulties experienced in the vestry meetings of rate-payers as regards the proposal for a new burial-ground on the common, *Ib.* 2650–2654——The proposed spot was two miles from the town; it would have been better nearer, but the council could get it for nothing, *Ib.* 2655–2657——The council calculated that fees from the rich would enable them to convey the poor at a very inconsiderable expense, *Ib.* 2658.

The burial-ground is crammed full, and the most disgusting scenes are witnessed there; skulls are brought up with the hair on, &c., *Deacon* 2627–2635——Complaint made by a man of the name of Targit that his wife's coffin was exposed, *Ib.* 2636, 2637——The part of the town near the burial-ground is low and densely peopled; there are burials under the catacombs of two churches, *Ib.* 2639–2645.——*See* also *Cemeteries,* 2. *Health,* II. 6.

Spa-fields Burial-ground. Quantities of funerals at Spa-fields burial-ground, yet there is always room made, *Whittaker* 528–545——Spa-fields ground is surrounded by houses, *Ib.* 548, 549——Number of burials and size of Spa-fields burial-ground, *Ib.* 554–557——Spa-fields is a better burial-ground than many parochial burial-grounds; it is more open, and there are not so many bones lying about, *Carr* 660–664.

See also *Destruction of Coffins.* *Health,* II. 7.

Report, 1842—*continued.*

Spain. A great number of the new burying-places are beyond the seats of population; the result has been generally satisfactory, *Bowring* 1832——How the expense was supplied when the alteration in the mode of burial was made to prevent the pestilential fevers in Spain, *Fellowes* 1935.——*See* also *Barcelona.*

Sparling, Mr. Letter from Mr. W. Sparling, town clerk of Colchester, dated 25 May 1842, to the Chairman of the Committee, giving information as to the state of the burying-grounds of the parishes of St. Peter, St. Runwald, and St. James, Colchester, *App.* 206.

Spirituous Liquors. All working men fly to spirits when they have a nasty job, *Munns* 610–612.——*See* also *Gravediggers,* 3.

Spitalfields. Unhealthiness is most prevalent in the city, in the neighbourhood of Spitalfields and Bethnal-green, *Harvey* 1829.

Stenton, Mr. Letter from Mr. H. C. Stenton, solicitor, Southwell, Notts, dated 10 March 1842, to the Chairman of the Committee, offering information on the subject of the inquiry, &c. *App.* 207.

Stephen's, St. (Coleman-street). Statement as to the accommodation for burials, and the mode in which vaults have been cleared, *Harker* 1947——A great many bodies have been buried in the common vault since witness has been there; there is no unpleasant effluvia from the vault; it is a large vault, and ventilated, *Ib.* 1947–1950. 1952——Number of burials in the parish annually, *Ib.* 1951——The churchyard is only on the north side of the church, *Ib.* 1953.

Stepney. Witness has seen skull-bones and arm-bones and teeth lying on the surface of the earth in Stepney Churchyard; has seen children playing with the bones, *Miller* 1658–1660——There have been several private cemeteries established lately in the parish, *James* 2706——Dreadful scene in Stepney Church in consequence of keeping a body too long before burial, *Ib.* 2939.——*See* also *Water,* III. 3.

Stokes, Mr. Letter from Mr. Thomas Stokes, Mayor of Leicester, dated 18 April 1842, to the Chairman of the Committee, in reference to interments within the precincts of the town of Leicester, *App.* 203.

Strand, The. Nuisance arising from the present excavation of the Strand, with reference to the sewers, *White* 2047–2053——Evidence regarding the opening of the street in the Strand, near St. Clement's Church, for the purpose of forming a sewer; the stench arose from human bodies, and not from the opening of any former sewer, *Walker* 2063–2068. 2092——Why the openings from the vaults under the churches in the Strand to the public streets can scarcely be considered to be injurious to those who are passing by, *Collier* 2107–2109——The gases emanating from the vaults underneath the churches in the Strand, or any other part of London, must be injurious to the health of the people, *Atkinson* 2267; *Lane* 2338.

Sulphuretted Hydrogen. Sulphuretted hydrogen is evolved from putrid bodies, which is so noxious, that 1 part in 500 of atmospheric air is fatal; a less proportion may produce typhus or putrid fever, *Brodie* 2912.

Sunday Funerals. Sunday funerals cause a desecration of the Sabbath, but could not be prevented without great loss to the labouring poor; shopkeepers are often buried as well as the poor on Sunday, *Abdy* 1336–1341.——*See* also *Clapham.*

T.

Tagg, Thomas. (Analysis of his Evidence).—Witness attends for the purpose of rebutting the evidence given before the Committee by William Miller affecting the burial-ground belonging to witness in Globe Fields, Mile End, 2123–2125. 2130, 2131——Produces the register books of such burial-ground, 2126–2129. 2141, 2142——Purport of the evidence which witness considers as injurious to him; evidence proposed to be produced to prove the falsehood of that given by William Miller, 2132–2138. 2146——The ground is not consecrated; it is not attached to any chapel, 2139, 2140. 2151——Size of the ground; depth to which a grave is dug without finding water; space of ground unoccupied; it is freehold, 2143–2145. 2147, 2148. 2150——Plan of burial by which 9,500 bodies have been buried in a space half of three-fourths of an acre, 2149-2158——Fees charged 2159, 2187.

Evidence respecting the burning of decayed coffins, 2160–2173. 2185, 2186——Witness has never observed any effluvium or bad smell, 2174, 2175——Persons of all religious denominations are interred in this ground, 2176–2181——A great many persons who have been dissected have been interred there, 2182–2184——A petition has been presented to the House of Commons from the Common Council, complaining of burials in witness's ground, 2188-2191——Time necessary for the decomposition of a body, 2192——The ground is surrounded by a wall; persons can see what is going on in the ground, the front iron work is open, and the gates are standing open all day long, 2192–2195.

Targit, Mr. See *Southampton.*

Report, 1842—*continued.*

Tartt, Mr. Letter from W. M. Tartt, mayor of Lyme Regis, dated 28 April 1842, to the Chairman of the Committee, respecting the state of the churchyards within the precincts of the town, and enclosing a statement of the number of burials from July 1837 to April 1842, *App.* 198.

Thoroughfares in Churchyards. Churchyards in London and Westminster which are thoroughfares enumerated, *Anderton,* 2232, 2233.

Todd, Dr. *Robert Bentley.* (Analysis of his Evidence.)—Fellow of the College of Physicians, and of the Royal Society, 2406——No inconvenience whatever has been felt from the contiguity of the grave-yard in Portugal-street to King's College Hospital; no disease of any kind has originated from it, 2407-2412, 2436-2443——Erroneous opinions have been put forward respecting the exhalation of the effluvium from grave-yards furnishing one of the most powerful causes of disease and mortality in the metropolis 2413-2421——Difference between typhoid fever and typhus fever, 2415——The gases emanating from human bodies are likely to be injurious to the general health, but not to produce any particular fever, 2422-2425——The state of disease prevalent at King's College Hospital is pretty much the same as at all hospitals; comparison of the various rates of mortality at this hospital and at St. George's, 2426-2433.

Tower Hamlets Cemetery. The Tower Hamlets Cemetery is considerably too low and too near the river, *Walker* 866—There are two classes of fees in the Tower Hamlets Cemetery, *Bishop of London* 3001——Fees settled by witness for the Tower Hamlets Cemetery, *Ib.* 3004.

Tyler, Rev. *James Endell.* (Analysis of his Evidence.)—Rector of St. Giles-in-the-Fields for nearly 16 years, 1413, 1414——The parish has two grave-yards, the one at the church the other a cemetery in Pancras-road, between King's Cross and Kentish Town, 1415——State of each described; number buried in 1841, 1415-1418——They continue to bury in London because they have no right to refuse, and the churchyard having been shut up for 20 years, there is no objection either on the ground of health or of decency, 1419——The Roman-catholic Irish prefer it to the cemetery as it was consecrated by a Roman-catholic bishop; course adopted during the cholera, 1419, 1420——The parish raised a sum of money on annuities to purchase the cemetery, which has been paid off, 1421-1424——Fees in the churchyard and in the cemetery respectively, 1425-1428——Before the Anatomy Act people were so anxious to be buried in front of the church where there were lights, that witness was obliged to raise the fees, 1428——Size of the churchyard, 1432-1434——A portion has not been disturbed for nearly 40 years, 1435——The graves are not less than 14 feet deep, and are put as close as possible side by side, 1436-1442——The orders are that not less than three feet of earth shall be above the uppermost coffin, 1443-1448——Regulations in the new ground as to the depth of graves and the quantity of earth above the coffins, 1449-1452——Extent to which it is occupied; length of time calculated before it will be full, 1453-1462.

Falsehood of a statement made in a Sunday newspaper in 1838, concerning the alleged bad state of St. Giles's Churchyard, 1463——Has not heard of coffins having been abstracted, 1464-1466——There would be objections to the use of quick lime, although it is much used on the Continent, 1467——Grave-yards in large towns, under good management are beneficial as they leave large open spaces, 1468——There are very few burials in the vaults; position, construction and ventilation of the vaults, 1469-1474——Pennant's account of the state of St. Giles's Churchyard no longer applies, 1476, 1477——Manner in which the ground became raised above the street, 1478——Witness would be a loser if all burials were prohibited in London, unless they continued in his new burial-ground, 1479-1486——How far the distance of the cemetery would be considered a hardship by the parishioners, 1487-1496——Double fees on extra-parochial dead, 1497——The bodies and coffins become entirely decomposed in 14 years, and the ground is then fit for new interments, 1498-1508——Leaden coffins are not allowed to be buried in the churchyard, 1509.

Typhoid Fever. Typhoid fever has been caused by exhalations from dead bodies; a fatal epidemic might owe its origin to a single case, *Walker* 901-905——Difference between typhoid fever and typhus fever, *Todd* 2415——Before witness, whose house overlooks the burial-ground of St. Clement Danes, had lived there three weeks, his child was attacked with typhus fever and died; Mr. Carpenter, who attended it, said it arose from the vicinity of the churchyard, *Irwin* 85-87——Different forms of typhus fever, according to the causes from which it arises, *Copland* 2668——*Vexata questio* as to the origin of typhus fever; whether infection arises from the dead as well as from the living, *Ib.* 2669——With proper regulations with regard to interments and privies, typhus fever might be unknown in the metropolis, *Lynch* 2693, 2694.

See also *Ague. Sulphuretted Hydrogen. West London Union.*

U.

Unconsecrated Ground. Opinion of the bishop noticed as to the propriety of having a portion of unconsecrated ground in cemeteries for Dissenters, *Rep.* v——No fees from any burials in unconsecrated ground to be payable to ministers of the Established Church,

Report, 1842—*continued.*

Unconsecrated Ground—continued.

Church, *Rep.* vii——Security should be taken that unconsecrated cemeteries should be preserved exclusively for Christian burial, except in special cases where the Legislature may interfere, *Bishop of London* 2948.

V.

Valpy, Mr. Letter from Mr. A. J. Valpy, dated 13 April 1842, to the Chairman of the Committee, enclosing papers relative to interments in cemeteries, *App.* 204.

Vaults:

Enon Chapel.—State of the vaults under Enon Chapel; scene witnessed there, *Whittaker* 406–410.

St. Clement Danes.—Number of coffins in the vaults under the church; smell arising when the vaults are opened, *Pye* 1226–1231.

St. Giles-in-the-Fields.—There are very few burials in the vaults; position, construction, and ventilation of them, *Tyler* 1469–1474.

See also *Andrew's, St.*, (Holborn.) *Enon Chapel.* *George's, St.*, (Southwark.) *Martin's, St.*, (Ludgate Hill.) *Sepulchre's, St.*

Ventilation. See *Churchyards.*

Verner, Mr. Letter from Thomas Verner, sovereign of Belfast, dated 17 May 1842, to the Chairman of the Committee, relative to the burial-grounds of the town of Belfast, *App.* 206, 207.

Victoria Park. Victoria Park would suffice as a cemetery for the north and east part of London for a century, *Bishop of London* 2973–2976.

W.

Wakes. The Irish still continue their wakes; they often delay the funeral because they want money for them, *Walker*, 900, 901.

Walker, George Alfred. (Analysis of his Evidence.)—Medical practitioner in Drury-lane, 784–789——Great sickness and mortality in the neighbourhood of Clement's-lane; it is in a filthy state, 790, 791——The exhalations from the dead must be injurious; they escape from churchyards, and even from leaden coffins in vaults, 792–796——Witness is certain that sickness is more prevalent in houses close to churchyards, 797——Offensive effluvia arising from churchyards, 798——Poor-ground in Clement's-lane, Portugal-street ground, and Enon Chapel mentioned, 799——All gravediggers are drinking men; the old ones take care not to be injured; they let others do the work, 800–802——Seven years should be allowed for a body to be consumed in a common coffin, 803——Stench coming from a leaden coffin buried in 1789, struck against in making a sewer in the Strand, 804, 805——Names of burial places personally examined by witness, 806——Persons living near all these must be affected in their health, 807–811.

Calculations as to the number of bodies that could be contained in Martin's ground in the Borough, and the number that have been buried there, 812——Cases of disease generated in persons attending funerals, 813——Reasons for burying some of the coffins only six inches from the surface, 814, 815——The working clergy are so careful not to breathe the air of graves that the sexton is ordered to place the box at some distance, 815——Reasons for concluding that animal matter is mixed up with the gases produced by dead bodies, 816–818——The carbonic acid and other gas destroyed the men in Aldgate churchyard in 1838, 819, 820——Particulars extracted from the Lancet, 13 June 1840, concerning the death of three persons from miasma, arising from St. Margaret's churchyard, 821——The commissioners for the improvement of Westminster in 1814, reported that that place could not be long used as a burying-ground, 821.

Examination as to the mode in which the health of persons near churchyards may be affected, and as to the evidence that it actually is affected, 822. 830——Cemeteries, if on high ground, might be very near a large town with safety, 832——The plan of "fosses communes," for the interment of the poor at Paris, recommended, *Ib.*——A barrister told witness lately that he had been affected several days after attending a funeral in the Waterloo-road; it is an improper place, owing to the humidity of the soil, 833, 834——The public would not submit to the Neapolitan plan of having a vault for every day in the year, 835——Objectionable practice of burying several coffins in a deep grave; such a grave only partially covered at St. Ann's, Soho, 836——Even as a matter of economy coffins should be placed side by side, instead of several in one grave, 837——The feeling against the Neapolitan plan might be removed, if executed in a more decent manner, 838, 839.

Many chapels have been established as speculations, for the burial of the dead; Enon Chapel for instance, 840–841——Time required to decompose bodies buried in different

Report, 1842—*continued.*

Walker, George Alfred. (Analysis of his Evidence)—*continued.*

situations, 842——Grave-yards ought to be at a distance from London, 843——Danger of the gases from graves finding their way into the wells; the pumps near some churchyards are not used, 844–856——Grave-yards should be in high and dry situations, 858, 859——No burials are allowed in Paris; the same law should be made in London; the main difficulty is the burial of the poor, 861–865——Remarks upon different cemeteries in the neighbourhood of London, 866–871——Unnecessary expense of coffins; leaden coffins are not the least protection, 872, 873——The conveyance of the bodies of the poor must be done by parishes, unions of parishes, or the Government, 873, 874——It would promote health to put quick lime into coffins, but it would be objected to, 875——Wood of which coffins should be made; description of French coffins, 876–879.

Remarks of Mr. Wakley as to the mode of burying in Chelsea, 878——Evil consequences of keeping bodies long before interment; cases stated, 879–886——If that practice were prevented, there should be a medical police to inspect bodies before interment, 887–892——The gases produced by churchyards are a very exciting cause of consumption in this country, 894——All grave-diggers have been more or less affected, 895——If chloride of lime could be introduced into all coffins, it would act as a valuable antidote, but the feeling would be against it, 896–898——All funerals should be undertaken under the authority of Government, 899——The Irish still continue their wakes; they often delay the funeral because they want money for them, 900, 901——Typhoid fever has been caused by exhalations from dead bodies; a fatal epidemic might owe its origin to a single case, 901–905.

[Second Examination.]—Evidence regarding the opening of the street in the Strand, near St. Clement's Church, for the purpose of forming a sewer; the stench arose from human bodies, and not the opening of any former sewer, 2063–2068. 2092——There is a public hospital to the east of the burial-place in Portugal-street; it is a very improper locality for a hospital; number of patients it will contain, 2069–2078——The period necessary for the decomposition of a body from quick lime being introduced into the coffin must depend very much on the state of the body; the purposes of interment are best fulfilled where rapid decomposition takes place, 2079–2086——Lime has been used to a great extent at Enon Chapel, 2087——Objections to a damp burial-ground, 2088–2091.

Walker, Mr. *G. A.* Letter from Mr. G. A. Walker, dated 3 May 1842, to the Chairman of the Committee, stating interesting facts connected with the inquiry, and offering practical observations upon the evidence adduced, *App.* 208–213.

Wallace, George Starkins. (Analysis of his Evidence).—Livery-stablekeeper in Whitechapel, 1520——Custom of burying in Whitechapel Church in open graves under the pews with only three or four feet of earth between the bodies and the flooring of the pews, 1521–1526——Average number of interments in a year in the church, 1526, 1527——Size of the churchyard; it is part leasehold, and part freehold; the burials have ceased for some years in the leasehold part, from the impression that the remains will be liable to be disturbed from the ground falling in at the end of the lease, 1528–1534——Average number of burials in the course of the year, 1535——Of late years the graves have been dug much deeper than formerly; a great many coffins are put into each grave; the ground seldom covers the top coffin more than three feet, 1536–1540——Desire of the inhabitants to provide a fresh burial-ground, 1541–1544——The opening of a burying-ground some years ago, called Sheen's burying-ground, has reduced the number of burials in Whitechapel ground considerably, 1548——Witness has never experienced, nor has he heard any complaints of any unpleasant effluvia from the churchyard, 1549–1551.

WATER:

I. *Injurious Effects of the Mixture of Animal Matter with it.*

II. *Advantages of bringing it from the Country by Pipes into the Town.*

III. *Qualities of it near particular Churchyards.:*

1, St. Anne's, Soho.

2. St. Clement Danes.

3. Stepney Churchyard.

I. *Injurious Effects of the Mixture of Animal Matter with it:*

Danger of the gases from graves finding their way into the wells; the pumps near some churchyards are not used, *Walker* 844–846——Water percolating through soils enriched by animal matter is injurious to the health of those who use it, especially in warm climates, *Copland* 2659, 2660——Filtration through a new soil will purify the water from its grosser materials, but in towns the communication extends to a great depth, and affects the water with morbific matter, *Ib.* 2661, 2662——Injurious effects of the admixture of animal and vegetable matter with water, *Ib.* 2671.

II. *Advantages*

Report, 1842—*continued.*

WATER—continued.

II. *Advantages of bringing it from the Country by Pipes into the Town:*

Bringing the water by pipes from the country into the town, and preventing individuals drinking the water which has percolated through the churchyards, has been beneficial to the health of the country, *Lynch* 2695–2697.

III. *Qualities of it near particular Churchyards:*

1. St Anne's Soho:

There is a pump in Dean-street, close to the churchyard; the water is good, *Copeland* 1390–1393.

2. St. Clement Danes:

A pump near St. Clement Danes has been shut up, as the water was found unfit for use, *Acton* 1298, 1299.

3. Stepney Churchyard:

Witness has ascertained that he has been drinking for years the water from the pump in Stepney churchyard, and that three medical men always drink it, and say it is the best in the neighbourhood, *James* 2945, 2946.——*See* also *Myddleton*, Sir *Hugh*.

Watford. See *Church Building Commissioners.*

West London and Westminster Cemetery. In the Westminster Cemetery there is a payment made for the clergyman from whose parish the body comes, *Russell* 2483——Ten shillings is payable to the clergyman of the parish for every burial in the West London and Westminster Cemetery, and is thought sufficient, *Bishop of London* 2948.

West London Union. In the West London Union there are a great number of courts and alleys, and the poor are always suffering under typhus fever; causes of this, *Lynch* 2683–2687.

Westminster Abbey and St. Paul's. Exceptions to be admitted to the proposed prohibition in favour of eminent public characters to be buried therein, *Rep.* vi.——Reasons why witness, in the event of a legislative enactment, would suggest the exception of Westminster Abbey and St. Paul's, *Milman* 2794–2808.

White, George Thomas. (Analysis of his Evidence.)—Practising barrister, 2029——Circumstances attendant upon an attack of illness experienced by him after attending the funeral of a friend at St. John's, Waterloo Road, 2030–2046——Nuisance arising from the present excavation of the Strand, with reference to the sewers, 2047–2053——Witness would have all dead bodies removed from towns, and from places where people live, 2054–2056——Offensive state of the burying ground in Portugal-street; case of the workhouse being denounced as unfit for an hospital from its proximity to the burial-ground, 2056–2060——Witness has no doubt that every burial-ground in London when opened has an offensive smell, 2061, 2062.

Whitechapel. Custom of burying in Whitechapel Church in open graves under the pews with only three or four feet of earth between the bodies and the flooring of the pews, *Wallace* 1521–1526——Average number of interments in the year in the church, *Ib.* 1526, 1527——Average number of burials in the course of the year in the churchyard, *Ib.* 1535——Size of the churchyard; it is part leasehold and part freehold; the burials have ceased for some years in the freehold part, *Ib.* 1528–1534——Desire of the inhabitants to procure a fresh burial-ground, *Ib.* 1541–1544.

Size of the burial-ground; average annual number of interments, *Champneys* 2863, 2864——Probable objection of the rate-payers to a rate for the purchase of a new burial-ground, *Ib.* 2873–2875——The living of Whitechapel is a rectory; the income is raised partly from fees and partly from tithes, or more properly the Easter offering from parishioners, *Ib.* 2891——The fees are heavy for interment in the church, *Ib.* 2895–2895*.

See also *Cemeteries*, 2. *Depth of Graves*, 2. *Effluvia*, II. 2.

Whittaker, George. (Analysis of his Evidence.)—Has been an undertaker for 16 years, 395–398——Has frequently seen coffins and bodies, old and new, cut to pieces with the spade to make room for fresh comers, 399–405——State of the vaults under Enon Chapel; scene witnessed there, 406–410——There have been at least 12,000 persons buried there, 411, 412——The stenches arising from putrid bodies has affected witness's health, 414–423——Pall-bearers are likely to be affected injuriously, 424–427——Effects of the escape of gas from a leaden coffin upon witness when engaged by Mr. Walker, a medical man, in collecting it, 428–442——Enon Chapel is surrounded by houses, and the gas must get into them, 443–446——The gas must escape from leaden coffins; if there is no vent, it will burst them; gravediggers have sometimes burned it, 447–457.

Description of a grave-yard in the New Kent-road belonging to Messrs. Hoole & Martin, 458–475——It is their own speculation; they appoint a dissenting minister to bury the dead, 476–494——Coffins are sometimes less than two feet from the surface; the gases would certainly come through, 495–498——The stench drove away the people from

Report, 1842—*continued.*

Whittaker, George. (Analysis of his Evidence.)—*continued.*

from Enon Chapel, and it was said that the minister got more by the dead than by the living, 499–502.

At St. Giles's-in-the-Fields the ground is very full of bodies, some of which are not more than 18 inches from the surface, 503–509——In most London burial-grounds there is scarcely any room; the bodies are near the surface, and exhalations must constantly be mixing with the air, 510–519.

In St. Giles's-in-the-Fields they are obliged to remove the dead; it is said they are put into pits with quick lime, 520–527——Quantities of funerals at Spa-fields burial-ground, yet there is always room made, 528–545——The Church of England burial-grounds are as crowded as those of Dissenters, 546——Spa-fields ground is surrounded by houses, 548, 549——Hoole & Martin's ground is also surrounded, 550–553——Number of burials and size of Spa-fields, 554–557——All the grounds are full, and noxious gases must escape, 560–562——It would be advisable to bury all persons out of town, but the working classes could not afford it, 563, 564——Quick lime is much used in all the grounds; people would not like it to be used as a system for destroying bodies in a short space of time, 565–569.

Wild-street, Little (Lincoln's-Inn-fields). Baptist Chapel in Little Wild-street, Lincoln's-Inn-fields; respectable mode of burying the dead there, still there is a bad smell in summer time, *Burn* 306–313.

Wooden Coffins. In some old parish churches, as St. Martin's, Ludgate-hill, bodies have been interred in wooden coffins under the church, *Bishop of London* 2948.

See also *Coffins.*

Y.

Yarrow, George. (Analysis of his Evidence.)—Parish clerk of St. Leonard's, Shoreditch, 1994——The grave-yard is far from being very bad, as described in answer to question of the evidence 1827: they have graves as deep as 17 or 18 feet without coming to water, 1995, 1996——It has occurred that at the depth of 14 or 15 feet they have come to water; this is pumped out; it is muddy, from the soil; there is nothing offensive in the smell, 1997–2006——Size of the ground; proportion subject to be flooded, 2007–2009. 2020——There is another burial-ground for the paupers in the Hackney-road; it is rather inferior than otherwise; the paupers are generally now buried at the mother church, 2010–2013——Complaints from the neighbourhood, when the bodies were taken up, the ground excavated, and then buried afresh, 2014–2017. 2028——Annual number of interments in the churchyard of St. Leonard's, Shoreditch, and in the pauper-ground in the Hackney-road, 2021–2023——Regulation as to the depth below the surface which the last coffin must be put in the grave; graves are dug as close as possible to one another, 2024–2027.

Yates, Dr. *Holt.* (Analysis of his Evidence.)—There can be no doubt that the present system of burying in grave-yards is prejudicial to the population of large towns; the only remedy would be providing burial-grounds at a distance, 2896, 2897——Putting quick lime or chloride of lime in the coffins would do a great deal of good; but it would be objected to among the poorer classes, 2898, 2899.

Yorkshire. Witness does not know a burial-ground in any of the great towns of Yorkshire which is not objectionable, *Baker* 2606.